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ABSTRACT

The central purpose of this study was to identify effective state strategies for school improvement and the conditions that facilitate these strategies within states and districts. Researchers conducted case studies in 10 states that currently have a state-sponsored school improvement plan: Arkansas, California, Colorado, Connecticut, Georgia, Maryland, Missouri, Ohio, Pennsylvania, and South Carolina. Two types of programs were studied: instructional improvement with an emphasis on a training component (five states), and schoolwide improvement (five states). Analysis of the case studies suggested that the introduction and implementation of school improvement programs have four main stages: initiation, initial implementation, complete implementation, and institutionalization. The state and local conditions facilitating the implementation of school improvement programs are described. The state educational agency actions that support school improvement are also discussed. Appended are: (1) descriptions of school improvement programs in 10 states and state contacts; (2) state school improvement programs checklist; (3) glossary of terms; and (4) information sources. (SI)

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Maintaining the Momentum for Educational Reform:

How States Can Support Local School Improvement

no. SI-86-1

by
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April 1986

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Beverly Anderson (project director) and Allan Odden drafted the final cross-site analysis document, based on analytic memos for each state written by the researchers. This document served as the primary base for all published documents. Each of the final documents was prepared by a smaller team of researchers in conjunction with ECS's skilled editor, Doris Ross.

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Abstract

Case studies of 10 statewide school improvement programs identified effective strategies that state education agencies can use to encourage, support and facilitate school improvement at the district and school level.

Two models of school improvement were studied — an instructional model that emphasized teacher and administrator training in a proven instructional technique, and a schoolwide model that frequently focused on a planning process. School improvement programs in Arkansas, South Carolina, Maryland, Missouri and Georgia used an instructional model; Colorado, Pennsylvania, Connecticut, Ohio and California emphasized the use of a planning process. Information was collected on the program design, people's roles, resources, outcomes (and what influenced outcomes), state and local context and state education agency relations and directions. A qualitative analysis of the case studies for each model yielded a causal network of events, conditions and activities that needed to occur for the program to successfully move through four stages of implementation. The four stages were initiation, initial implementation, complete implementation and institutionalization.

The implementation of school improvement programs was facilitated by several state and local conditions. Some state conditions included support of the program by political and education leaders, availability of discretionary funds, the existence of a state pressure to improve (such as an accountability pressure) and the existence of a knowledgeable staff at the state education agency who could provide assistance to districts. Facilitating local conditions included stable and strong local leadership, lack of turmoil, lack of "innovation overload" (too many changes taking place simultaneously) and small school size with minimal complexity.

State actions that can support school improvement were found to be especially critical in the selection of the type of program and during the first two stages of implementation. Recommended actions that state education agency staff can take in conjunction with other state education leaders include:

- Making school improvement a high priority in the state
- Getting support for school improvement from top leadership at the state and local levels
- Selecting a proven school improvement model for use

- Facilitating implementation of the program at the local level by getting commitment to the program, providing resources and technical assistance and developing collegial working relationships with local educators

- Building networks to help spread the program and highlight success

Executive summary

Almost 40 states have initiated some type of state-level school improvement program based on research describing what comprises an effective school. These programs help schools improve by adopting the characteristics of effective schools or by engaging in a goal-setting and planning process. The central purpose of this study was to identify effective state strategies for school improvement and the conditions that facilitate these strategies within states and districts.

Methods of the study

How can states encourage school improvement? To answer this question, researchers conducted case studies in 10 states that currently have a state-sponsored school improvement program. The states selected had programs emphasizing the principles of effective schools and effective instruction. They represented a range of strategies and diversity in regions of the country, population, per-capita income and degree of local control. The states participating in the study were Arkansas, California, Colorado, Connecticut, Georgia, Maryland, Missouri, Ohio, Pennsylvania and South Carolina. Two types of programs were studied. One type focused on instructional improvement and emphasized a training component (five states). The other type emphasized schoolwide improvement, frequently focusing on a planning process (five states).

The case studies were based on interviews with staff in the state education agency (SEA) and visits to schools in three or four districts. Schools with moderate to high outcomes were chosen so that the researchers could analyze the conditions for success. Eight researchers planned the research design, collected data and prepared analytic memos for each state. Qualitative data analysis techniques were used as described by Miles and Huberman (1984).* A final cross-site analysis served as the primary source for this guide.

The four stages of school improvement

Analysis of the case studies suggested that the introduction and implementation of school improvement programs have four main stages: (1) initiation, (2) initial

*Matthew B. Miles and A. Michael Huberman, **Qualitative Data Analysis: A Sourcebook of New Methods** (Beverly Hills, Calif.: Sage Publications, 1984).

implementation, (3) complete implementation and (4) institutionalization.

During the **initiation stage,** districts and schools perceive a real need to become involved in a school improvement program. Perception of this need can result from a number of factors (e.g., outside accountability pressure, the fit of the program with local goals and the belief that the program is high quality).

During the **initial implementation stage,** the focus is on training personnel to use the new program and developing a district orchestration plan. Two typical activities are creating teams in the school to implement the program and training staff members to conduct the program. The quality of the training program is important in this stage, as are early and continued rewards.

Program outcomes become apparent during the **complete implementation stage** (e.g., student achievement, better instructional practices, improved school climate). In this stage the program is fully and faithfully implemented and program staff get technical assistance and other sorts of organizational support.

During the **institutionalization stage** outcomes are sustained, structures are altered to conform with the program and changes become standard operating procedures.

State conditions that support school improvement

Several general political/economic/organizational variables seemed most important in facilitating school improvement at the state level.

1. **State pressure to improve.** In the states studied, the pressure of new testing programs and other reforms provided the catalyst for obtaining resources and committing to some kind of action.

2. **Consistency with traditional state/local control practices.** Where programs were mandatory, they were usually linked to traditional state regulatory functions, like accreditation and certification. Where programs were voluntary, states generally required adherence to process but allowed choice in content.

3. **Support of political leaders.** Although most programs were initiated by state departments of education, those supported by governors and legislatures grew in size and strength.

4. **Availability of discretionary funds.** Most local efforts required extra time from teachers, training for staff, the development and purchase of materials and the use of consultants. The availability of discretionary funds supported the program and helped school teams recognize that the district and the state valued the improvement program.

5. **Political support within the SEA.** This sort of support was as important as support from outside the department. The strongest programs had a strong SEA advocate, like the chief state school officer or someone backed by the chief. When internal support was not clear and strong, outside support was weakened, and programs became vulnerable.

6. **Cooperation.** Collegial ventures were more successful than ventures that were seen as bureaucratic necessities. An emphasis on working together sometimes set a new style for SEA and local education agency (LEA) interaction and was particularly significant for smaller districts with fewer resources.

7. **Knowledgeable SEA staff.** Local impact was enhanced where SEAs adequately staffed a program with skilled professionals, placed these professionals in a separate unit and integrated their efforts with other SEA improvement projects.

8. **Belief in the need to develop local capacity.** The provision of technical assistance that helped develop local capacity was a critical variable in successful projects.

Local conditions that support improvement

These local conditions most affected the success of school improvement programs.

1. **Lack of turmoil.** The absence of strained relationships, community opposition and fragmentation caused by such things as staff cuts and school closings helped programs thrive.

2. **Lack of innovation overload.** If too many programs and changes were occurring simultaneously, programs suffered. Too many innovations appeared to strain capacity and signal confusion about priorities. Single programs over time were most successful.

3. **School size and complexity.** Large schools had more difficulty implementing school improvement programs, regardless of the type, than small schools. Attending to detail was easier when fewer people were involved. In large, complex schools, programs required greater leadership support and organization to be effective.

4. **Staff and leadership stability.** Turnover made program implementation more difficult. In instructional programs, skill mastery was difficult to develop when new people constantly had to learn new skills.

SEA actions that support school improvement

The study found that these actions contributed to the success of improvement programs.

1. **Make school improvement a high priority.**

   - Use the current national attention on education reform and public support for education to make school improvement a high priority.
   - Keep the idea of educational excellence high on the state agenda.
   - Establish or strengthen programs such as testing, accountability processes and student requirements that keep pressure on schools to improve education.

2. **Get support for school improvement.**

   - Encourage the support of top leadership at all levels — in the state (governor, legislators, chief and program heads), in the district and in the schools. District leaders orchestrate and support improvement programs; principals and teachers become advocates and implementers.
   - Balance compliance and assistance strategies. An element of volunteerism is important because local ownership is necessary for success. But states

can require program initiation and faithful implementation. Make sure that schools get ample, high quality, ongoing technical assistance. Support top-notch training by trainers skilled in the program and the training process.

- Be flexible. Adjust technical assistance and other types of help to the specific problems that arise as a strategy is used.
- Ensure that support is provided throughout all stages of the change process.
- Provide a process that encourages schools to continue to change.
- Develop a positive, cooperative working relationship with local educators. Successful districts see joint ventures with the SEA as collegial rather than bureaucratic.
- Understand the conditions that can help or hinder local implementation. Schools in turmoil or overloaded with innovation have difficulty implementing a school improvement program. However, schools with stable leadership and good relationships between management and labor have good chances for success.

3. Build networks.

- Publicize the successes of districts and schools.
- Support conferences or other networks where people from successful districts can share their experience.
- Use the experience of leaders in successful schools and districts to help develop the skills of SEA staff who provide technical assistance.

Introduction

1

How to maintain momentum is the challenge that now faces policy makers in the many states that have initiated major reforms of education over the last several years. It seems clear that momentum will in most cases mount only if reform moves from the legislatures and state boards into classrooms. That is, unless reform produces solid advances in student learning, continued progress seems unlikely. Exactly how to carry reforms into classrooms, though, seems much less clear, if only because relatively little has been known about techniques states can use to effect that transition.

The purpose of this guide is to share information about one type of technique states can use to maintain momentum. More specifically, its purpose is to show what helps state "school improvement" programs succeed in districts and schools. These are programs that set out in various ways to help schools acquire the characteristics that, according to research, will strengthen opportunities for student learning.

Almost 40 states have initiated some type of state-level school improvement program based on existing research describing what comprises an effective school. These programs have been initiated to help schools improve by either adopting the characteristics of effective schools or by engaging in a goal setting and planning process. Although change actually takes place at the school and classroom level, the state education agency can play a key role in instigating and supporting school improvement at the local level. In states where school improvement efforts have been particularly effective, state leadership has been supportive and committed to the effort.

Information contained in this guide is based on findings from case studies of 10 state school improvement programs. The central purpose of the study was to identify effective state strategies for school improvement and the conditions that facilitate these strategies within states and local districts.

This guide is designed to provide state education agency (SEA) staff who are responsible for state school improvement programs with an understanding of the important elements to consider when designing, implementing or revising a state strategy to support local school improvement. There is no one state program that is the "perfect" answer for all states. But there are certain elements, program designs and implementation strategies that are widely applicable in any state program. The framework for developing and operating a state school improvement program that takes into account the unique characteristics and conditions found in each state is presented here.

This guide is divided into six chapters. The first chapter briefly reviews the characteristics of effective schools, describes the programs studied and discusses four stages of implementation of a successful school improvement program. The second and third chapters give specific details about each of the two school improvement strategies studied — instructional improvement and schoolwide improvement. Chapter 4 presents a summary of the important elements of each strategy and highlights the differences between them. In Chapter 5, the conditions in the state and local districts that need to be considered when designing or implementing an improvement strategy are described. And finally, Chapter 6 summarizes suggestions for actions state education agency staff can take.

It is anticipated that readers of this guide will have significantly more interest in one strategy over the other. For this reason, Chapters 2 and 3 present a complete description of the instructional and schoolwide improvement models, respectively. To the extent that there are many similarities between the instructional and schoolwide strategies, some information appears in both chapters. For this reason, the reader is encouraged to read either Chapter 2 or 3 and then Chapter 4 to find the salient features of the other strategy and the comparative differences.

Appendices include a more thorough description of the 10 state school improvement studies, glossary of terms, a checklist for developing or reviewing a school improvement program and information sources.

What is school improvement?

During the 1970s many research studies identified characteristics of effective schools. The studies varied widely — some were outlier studies that separated the best schools from the worst schools on statistical grounds and then tried to account for the differences. A great many were case studies of schools that seemed effective in terms of student outcomes. Others, in an effort to find out why some programs were especially successful, evaluated particular programs such as reading programs or compensatory education programs. These diverse studies, surprisingly, produced very similar results that together form a strong research base that describes the characteristics of effective schools and classrooms. Among the most significant characteristics are:

- **Expectations for student learning are high.** Teachers set high standards for learning and expect all students to meet them.

- **School leadership is strong.** School principals and leaders emphasize instruction and the importance of learning. They have a clear vision of the school's goals and they find resources, remove obstacles and encourage accomplishment.

- **Instruction is guided by a defined curriculum that is clear and focused.** Learning goals and objectives meet school and district guidelines and are approved by teachers.

- **Teachers and administrators continually strive to improve instruction and learning.** The school staff approves of and is involved in the planning and implementation of school improvements. Staff development is comprehensive with an emphasis on using new approaches in the classroom.

- **Student progress is closely monitored.** Routine academic assessments are used to check student progress and diagnose learning needs. Assessment is closely linked to curriculum goals and content.

- **Class time is used for learning.** Interruptions are less frequent, classroom routines are smooth and efficient, time is allocated for each subject with a minimum of time spent on management or transitions.

- **Discipline is fair and consistent.** Standards of behavior are explicit and quickly enforced.

- **The conditions for learning are pleasant.** The physical environment for learning is clean, safe, orderly and attractive. School climate is warm and supportive.

Models of school improvement

Since school improvement ultimately occurs at the school and classroom levels, the question faced by state education agency staff is, "What role, if any, can we play in encouraging that improvement?" To answer that question, case studies were conducted in 10 states that currently have a state-sponsored school improvement program. The states selected had programs emphasizing the principles of effective schools and effective instruction. States were selected to provide a range of strategies, diversity in regions of the country, population, per-capita income and degree of local control. The case studies were based on interviews with SEA staff and visits to schools in three or four districts in each state. Schools with moderate to high outcomes were chosen so that the successful implementation of the state program could be identified and analyzed.

Two types of programs were selected — one type emphasized a training component; the second type focused on a planning process. As the study progressed, it became clear that the first type was primarily oriented toward instructional improvement whereas the second type was oriented toward general schoolwide improvement.

Instructional improvement programs were designed to improve teaching and instruction in the classroom by encouraging teachers and supervisors to use new teaching techniques or instructional strategies. The instructional model selected usually had a national reputation such as clinical teaching or mastery learning. In some studies, those initially trained in the technique would train other teachers in their district or school, thus spreading the technique to others (i.e., turnkey training).

Schoolwide improvement processes often featured a planning process where a school team (including teachers, principal, parents) looks at the needs of a school, decides on a priority area to target for improvement, develops a plan to address the priority, implements the plan and evaluates the results. This process is frequently cyclical and can take from several months to several years to complete. At the end of the cycle, results are evaluated and the program is revised accordingly.

Although one strategy uses schoolwide planning as a beginning and the other uses classroom instructional techniques as a focus, both are designed to make the school more effective in helping learners to be successful.

In the 10 states studied, 5 used an instructional model and 5 used a schoolwide model. A brief overview of the 10 state school improvement programs appears below. More detailed information on each program and names of contacts appear in Appendix A.

Instructional programs

In **Arkansas,** the "Program for Effective Teaching" (PET) trains teachers in specific methods of organizing lessons and teaching students. It also trains principals in supervising teachers in the use of those methods. The methods, based on work by Madeline Hunter and Benjamin Bloom, have proved popular, and the program has spread throughout the state by using turnkey training. Although PET is entirely a voluntary program and the involvement of the state education agency is limited, three-fourths of all principals and teachers in Arkansas have been trained together with about half the education staff in Arkansas' colleges and universities.

South Carolina also is using the PET program to train teachers as one of three school improvement initiatives that have been incorporated into the state's Education Improvement Act of 1984. The PET program operates very much as it does in Arkansas. It has been operational since the fall of 1983 and is not yet as well established as the Arkansas program. Other school improvement efforts in South Carolina include the School Effectiveness Program, which encourages schoolwide planning, and the Administrators' Leadership Academy, which has ties to the Assessment Center of the National Association of Secondary School Principals, and which trains principals.

Training teachers is the purpose of the **Maryland** training program, School Improvement Through Instructional Process. Rather than offering only a single training program, Maryland made available four different methods of improving teaching: "active teaching," "mastery learning," "student team learning" and "teaching variables." The state department of education in Maryland helps schools and districts participate in these voluntary programs by providing resources and training district teams to plan and implement the model. Like South Carolina, the Maryland program is strongly influenced by an administrator academy emphasizing instructional leadership.

Like the "mastery learning" approach available to Maryland teachers, the "Instructional Management System" used in **Missouri** emphasizes the importance of teaching to specific objectives and helping students master basic skills. The Missouri program, developed after the state adopted minimum competency testing in 1979, is voluntary. The strategy of the state department of education has been to introduce the system to principals and superintendents at week-long summer institutes (first held in 1981). In 1984 the department set up "lighthouse" districts in 17 regions of the state; these districts receive technical assistance, which they in turn provide to other districts.

The training program used in **Georgia** is for appraising beginning teachers. As with other state training models previously described, the goal of the program is to make teachers more effective in the classroom. But, the mechanisms for improving effectiveness are quite different from other models. New teachers in Georgia must demonstrate, on tests and in on-the-job assessments spaced over three years, that they have mastered 14 specific teaching skills; only teachers who have demonstrated mastery receive teaching certificates. Defining the skills and setting up a system for assessing them have been major undertakings of the state department of education. As a result, a large portion of the school districts employ assessment criteria for all teachers similar to those used to certify beginning teachers.

Schoolwide planning programs

The planning process that **Colorado** requires schools and districts to use for accountability and accreditation is very typical of the processes used in other states'

school improvement strategies. In this planning process, schools and districts must identify needs, set priorities, develop and carry out action plans and report results to the public. The state does not specify what the priorities and actions should be; content is left to local discretion.

Colorado has also established a voluntary "cluster" program that encourages groups of schools in a geographic area to collaborate on a common theme related to school improvement efforts.

Pennsylvania has required schools to use a comparable planning process for the past 17 years. However, unlike Colorado, the planning cycle is designed to take five years. For many years, schools chose the content of their planning cycle; more recently the state controls plan content by asking schools to meet 2 or 3 of 12 statewide "quality education goals" through the planning process.

Planning for school improvement in **Connecticut** is voluntary, but the state department of education plays an active role in the early stages of the two-year planning cycle. Department staff helps to assess the needs of participating schools and assist them in setting priorities. Problem solving becomes the responsibility of teams of faculty members.

Also voluntary, the **Ohio** Effective Schools Program aims to improve student achievement by improving school leadership through helping principals develop a vision of effective schools. The program institutes a systematic planning process. The emphasis on the importance of leadership is evident in the department's establishment of the Ohio Academy for School Improvement Strategies, where principals and superintendents learn how to make schools effective.

The **California** program, like the Pennsylvania program, is long-standing; it was established 14 years ago. It too, specifies a process for schools to follow in planning for school improvement. The California program is supplied with more substantial state resources than all the other planning programs studied. Last year the "school site councils" responsible for local plans received $106 per pupil in additional state money. Recently, the focus of the planning process has been on curriculum improvement.

Overview of four stages for implementing a school improvement program

Analysis of the case studies completed for the 10 state programs described above provided the basis for suggesting a four-stage model of school improvement. These four steps are: (1) initiation, (2) initial implementation, (3) complete implementation and (4) institutionalization. At each of these four stages is a set of elements or "variables" that need to be present for successful movement from one stage to the next.

The first stage of the implementation process for school improvement programs is **initiation.** In this stage, local districts and schools perceive a real need to become involved in a school improvement program. Perception of this need can result from a number of factors, such as an outside pressure for accountability (e.g., a state testing program), the fit of the school improvement program with local goals and the belief that the program considered for use is of high quality, legitimate and contains a philosophy consistent with the schools' mission and philosophy.

In the second stage, **initial implementation,** the focus is on training educators to use the new program and developing a district orchestration plan. Two typical

activities in this stage are the creation of "cross-role" teams within the school to implement the program and training activities for teachers and principals. A cross-role team is composed of central office staff, principals and teachers (who usually represent most grades in the school or departments). As schools become involved in this stage, it is common for school staff to get immediate rewards from being involved in the new program (such as better teaching skills or a sense of satisfaction that the school will achieve new goals). These immediate rewards fuel the enthusiasm for the new program and help move the school to the third stage — complete implementation.

This third stage, **complete implementation,** is characterized by student, teacher, principal and school outcomes produced by the school improvement program. Outcomes can include increased student achievement, better instructional practices used by teachers and an improved school climate. Desired outcomes are most likely when the school faithfully implements the school improvement program and when adequate technical assistance (usually in the form of ongoing coaching) is available to the district and the schools.

Finally, in the fourth stage, the program is **institutionalised.** This occurs when the program has both individual and school outcomes, such as those mentioned above, and when schools change their organizational and structural processes to sustain these outcomes. In the institutionalization stage, schools solidify these changes to the extent they become the new operating procedures or norm for the way the school functions.

A much more detailed description of how these four stages of implementation proceed in the instructional improvement model appears in Chapter 2; for the schoolwide improvement model, see Chapter 3.

The instructional school improvement model

2

Instructional school improvement programs focus on improving teaching and instruction in the classroom by encouraging teachers and supervisors to use new teaching techniques or instructional strategies. The instructional model usually has a strong and proven reputation such as clinical teaching and mastery learning. Typically the strategy is to train as many teachers and supervisors in the technique as possible — and to accomplish this, turnkey training is often used.

As described in the previous chapter, successful instructional programs for school improvement proceed in four stages: initiation, initial implementation, complete implementation and institutionalization. This study identified a set of variables associated with successful movement through one stage to the next. While not all variables were evident in all successful local programs, most were present — and when all were present, education improved.

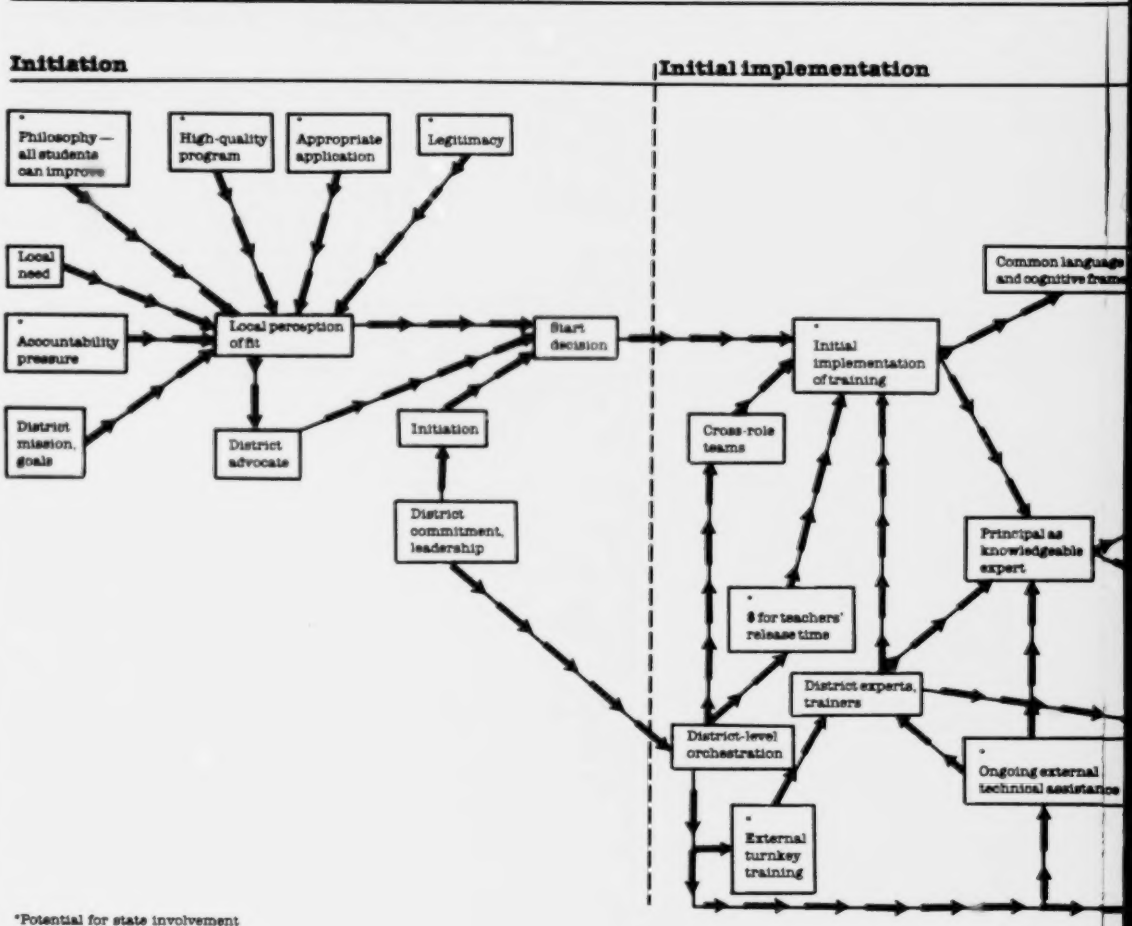
Diagram 1, which presents the network of variables in all four stages for the instructional school improvement model, is derived from a synthesis of the key factors across the schools in states with instructional programs.

Stage 1: initiation

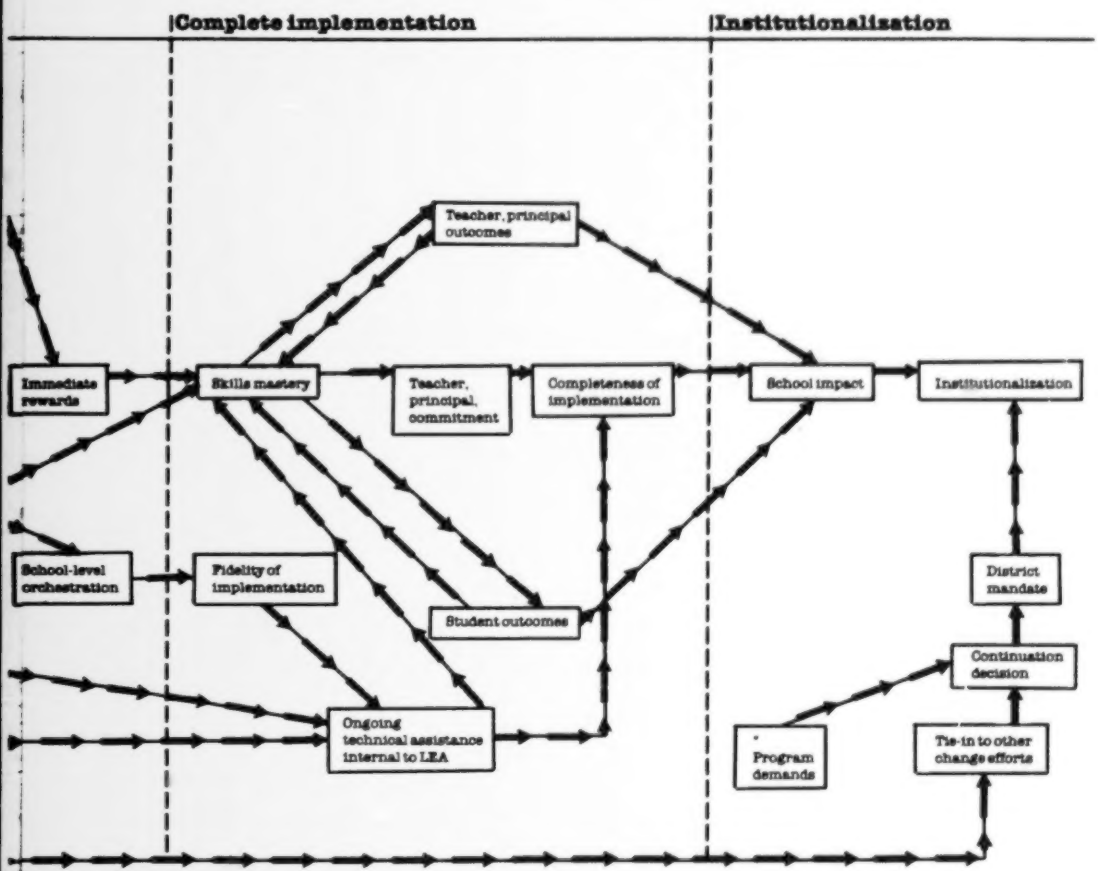
During the initiation stage, in each state studied, a number of variables came into play to successfully begin an instructional school improvement model. First, one of the most important variables was a **pressure for accountability,** either state or local, that created a **local need** to improve. A new state testing program in basic skills, a district decision to improve student performance or a state education reform, mandate or incentive to raise standards could have provided accountability pressure. This external pressure heightened schools' sense of a need to change. (It is important to remember, however, that the schools studied were engaged in a positive change process; the effect of external pressures on schools not ready to change may be different.)

Second, our study revealed that there needs to be a **perception of fit** of a state improvement program with local goals or a **district decision** based on a local sense of need to improve. When central offices and local boards were integrally involved in an improvement effort, including the decision to participate, chances for successful implementation improved. **Perception of fit** evolved from an alignment of several factors. First was a **match between state program and perceived**

Diagram 1.
Four stages of implementation for the instructional improvement model



*Potential for state involvement


Complete implementation
Institutionalization
Teacher, principal outcomes
Immediate rewards
Skills mastery
Teacher, principal, commitment
Completeness of implementation
School impact
Institutionalization
School-level orchestration
Fidelity of implementation
Student outcomes
District mandate
Continuation decision
Ongoing technical assistance internal to LEA
Program demands
Tie-in to other change efforts

local need. Often, the program itself had a good national or regional reputation, like the programs used in Connecticut and Ohio. Third was a good **match of the state program to content area and grade level of school.** When this match was poor, implementation languished. Fourth was an aura of **legitimacy** surrounding the program, its sponsor outside the district, its sponsor within the district and those involved in training. **Legitimacy** developed in different ways, but it usually proved an important variable. Fifth was an underlying **philosophy that all students can improve** their academic performance and that all teachers can improve their teaching effectiveness. Sixth was an overlap of **state pressures for change** with district pressures.

Another important element was the existence of a **district advocate for the program** who was knowledgeable about the program and believed it fit district and school needs. Often this advocate became the district coordinator of the program or gave formal backing to whomever else became coordinator.

Stage 2: initial implementation

In the second stage, initial implementation, the focus is on **training** educators to use the new program and developing a **district orchestration** approach. During initial implementation, it was important to reflect **an effective training program that produced immediate results,** like active teaching, clinical teaching or mastery learning. It was important that **trainers were experts** in the substance of the program, that they had good training skills and that they modeled strategies when teaching them. It was also important to give teachers opportunities to practice what they had learned. Good training provided senior teachers with a **common language** to describe effective practices, which in turn helped them analyze their own instructional approaches and communicate more effectively with parents. It gave inexperienced teachers a language, too, and a clear process for developing lesson plans. Good training also focused on the issue of paramount concern to teachers — instructional effectiveness. Whatever the specific reasons for immediate results, the emergence of results helped move school programs into the complete implementation stage. **District orchestration** of a series of management and administrative tasks had to be carried out and coordinated, which began the district's strategy for implementation. Up-front training was needed, substitute teachers sometimes had to be hired, central office staff needed to coach school personnel, data on impacts needed to be returned to schools, paperwork needed to be processed, board support needed to be sustained and often, additional resources were required. Without district orchestration, local efforts were isolated.

Another important element for successful initial implementation was the **creation of a cross-role team,** i.e., a team of central office staff, school administrators and teachers. These teams played various roles, but they were present in nearly all schools that experienced high success. The creation of these teams was often a first step in district implementation. Cross-role teams usually determined how programs would be implemented in particular schools and thus gave team members shared involvement in the specifics of program implementation. Cross-role teams often were the visible sign that teachers and administrators would work together on implementation.

Several spin-offs of cross-role teams also proved important. First, the testimony of team members who experienced the first cycle of a training program helped spur additional interest. Second, **principals emerged as experts** knowledgeable about program substance as well as about program administration. Third, cross-role teams often gained a **"common cognitive frame"** and a common stake in the success of the program.

Finally, provision of a variety of resources, including not only money and **teacher release time,** but also **external and internal technical assistance,** was critical. Where resources were not provided by the state, they were provided by districts. **District orchestration and school orchestration** plans had to have carefully coordinated activities, strategies and tactics for program implementation to be successful.

Finally, **turnkey training** (training the trainers) created local experts, which in turn freed districts from complete reliance on external experts (usually state program staff) and allowed them to spread programs to other schools more easily. Local experts also provided coaching during the complete implementation stage. Finally, many local experts were principals, who thereby became substantively and visibly involved in program implementation. When states maintained and expanded turnkey programs, local expertise was strengthened.

Stage 3: complete implementation

Student, teacher and principal outcomes characterize the complete implementation stage. These outcomes are a result of the **technical mastery of new teaching skills.**

Skill mastery evolves from: coaching, as teachers and principals work through the difficulties of using new techniques; fidelity and fullness of implementation by districts and schools; leadership by knowledgeable principals; and commitment to the new instructional strategy deriving from the immediate rewards for school staff produced during initial implementation.

Skill mastery produced two other important variables in this stage: **teacher/principal outcomes** and **student outcomes,** which in turn led to further mastery of skills.

In short, when teachers realized that a program improved their instructional effectiveness (teacher outcomes), and when principals realized that it improved their instructional leadership (principal outcomes), and when both saw that it improved student outcomes, there was renewed energy to hone skills. From this confluence of outcomes flowed another variable — **teacher and principal commitment.** Commitment then led to **complete implementation.** Put differently, commitment emerged at the end of the implementation process, not at the beginning.

During complete implementation, it is very important for schools and districts to have access to **technical assistance** from SEA staff or other experts. This technical assistance should assure that the necessary ingredients exist to produce teacher and student outcomes that lead to commitment to the school improvement program. These necessary ingredients include coaching (helping teachers and principals use the new techniques), promoting knowledge and leadership by the principal and encouraging districts and schools to **implement the program as faithfully to its original design** as possible.

Stage 4: institutionalization

When schools change their organizational structure and ways of operating to sustain individual and school outcomes, institutionalization has occurred. For a school to reach this final stage, a number of **school impacts** have to take place. These result from teacher and principal outcomes, student outcomes and full implementation. School impacts were either organizational (e.g., a focus on instruc-

tion, changes in teacher supervision practices or new curriculum policies) or cultural (e.g., the development of a positive climate, raised expectations, more collegiality, interest in continuous improvement).

When instructional strategies, which aim to improve the skills of individuals, were successful, they had significant effects on schools as organizations. **Institutionalization** evolved when school impacts resulted.

Another important event was a **district decision to continue** a program, which was often a **district mandate** for all teachers, administrators and schools to participate. Although school programs could continue without district action, district commitment helped sustain local programs. District support also played an important role in **tying the state school improvement programs to other efforts** to change schools and in signaling the importance of school improvement programs.

If a state program was too **demanding** by requiring extensive organizational changes in schools (e.g., major reorganization of the curriculum, or other changes requiring significant resources or making significant demands), its chances for institutionalization were reduced.

For the most part, institutionalization takes place if the first three stages of implementation are successful and the school is flexible enough to adapt its organizational structure and processes to integrate the new program as part of its ongoing activities. However, the SEA can promote institutionalization of an instructional school improvement program by encouraging local districts to commit to and sustain the program.

Local commitment helped integrate teachers' instructional skills with other district programs and helped signal the importance of school improvement in local districts.

To provide an understanding of how these four stages of implementation actually occur in a school, a description of events at Norrisville Elementary School* follows.

How the model worked for Norrisville Elementary School, Maryland

At the **initiation stage,** accountability pressure in Maryland grew from state-mandated competency tests. The chief state school officer, whose first initiative, Project Basic, included the state assessment program, supported the SEA's creation of the School Improvement Through Instructional Process program (SITIP) as a means to improve student performance. The assumption was that students could do better if instruction were more effective.

Norrisville selected active teaching from the four instructional models SITIP offered. Active teaching is a research-based, high-quality program developed by a nationally known researcher, Tom Good, and proved effective in a number of studies. Norrisville applied active teaching to elementary mathematics, an appropriate application since the program to improve elementary school mathematics instruction had already been developed. Legitimacy derived from the consultation of Tom Good in SEA training sessions, the development of SEA program experts and the active support of the chief state school officer. The SEA supplied grants to schools par-

*Names of schools have been changed.

ticipating in the program, which showed that active teaching was a high priority. District support and long-term commitment evolved, in part from the state testing mandate but also from a new district policy to change the mathematics curriculum and adopt a new textbook series. Curriculum change became the "what" of local improvement; SITIP and active teaching became the "how." A state mandate tied to a district priority induced Norrisville to participate in a state program.

At the **initial implementation** stage, the district:

- Obtained curriculum-committee endorsement for active teaching.
- Decided to offer training in active teaching in an intensive districtwide inservice program.
- Created a cross-role team of teachers, principals and central office staff (a state requirement for school participation). This team was trained in active teaching during the summer of 1981. It also planned implementation processes and prepared materials.
- Managed approval of training materials and the training of elementary and middle school principals and teachers.

Members of the cross-role team trained other teachers and principals after they had completed one cycle of training. Training the cross-role team and then principals and teachers produced a common cognitive frame about active teaching, made principals knowledgeable leaders and helped align the new mathematics curriculum with underlying teaching strategies. A small state grant to Norrisville provided extra funds for materials, conferences and release time for training. An immediate result for senior teachers was that they acquired a language to describe their effective practices, and saw numerous signs that implementing the new mathematics curriculum was a priority for principals and district administrators.

In the **complete implementation** stage, the state and district provided coaching and technical assistance. SEA staff visited Norrisville to discuss implementation issues, participated in district workshops and helped develop materials. The district provided a series of workshops, and the district's mathematics supervisors used active teaching in inservice training sessions. The principal coached teachers and included active teaching strategies in the objectives for classroom observations. Teachers developed considerable mastery of active teaching skills. As a result, instructional effectiveness improved, teachers' attitudes toward teaching improved, students became more task-oriented, student achievement rose and grade-to-grade articulation in mathematics improved. Commitment to the program solidified, and complete implementation resulted.

Linking the active teaching program to the district's new mathematics curriculum obviously helped **institutionalization.** So did the district's decision to require all teachers to be trained, as well as the spread of the program to middle schools after one year in the elementary schools. Among the schoolwide impacts were greater collegiality, a unified approach to mathematics instruction (all mathematics classes scheduled at one time with homogeneous student grouping) and better attitudes toward education improvement. Other signs of institutionalization at Norrisville were:

- Using active teaching strategies in the principal's observations of teachers
- Using those strategies in school inservice training programs
- Sending all new teachers to district training in active teaching

In short, active teaching in Maryland's SITIP program in Norrisville Elementary School showed that a state can take the initiative to strengthen teachers' instructional effectiveness in a manner that can have significant success.

The schoolwide school improvement model

3

Schoolwide improvement strategies are usually characterized by a planning process that identifies one or a few school needs, develops and implements an action plan and evaluates the results. Unlike an instructional strategy that is highly defined, the schoolwide planning process is flexible. The "content" of the planning process is usually identified by the school. Examples could be trying to achieve the characteristics of effective schools or improving student discipline.

Successful schoolwide education improvement programs also proceeded through the four stages of change: initiation, initial implementation, complete implementation and institutionalization. At each stage, certain program characteristics and activities seemed central to successful change. Diagram 2 presents the network for all four stages of implementation derived from analyzing schools in states with schoolwide programs.

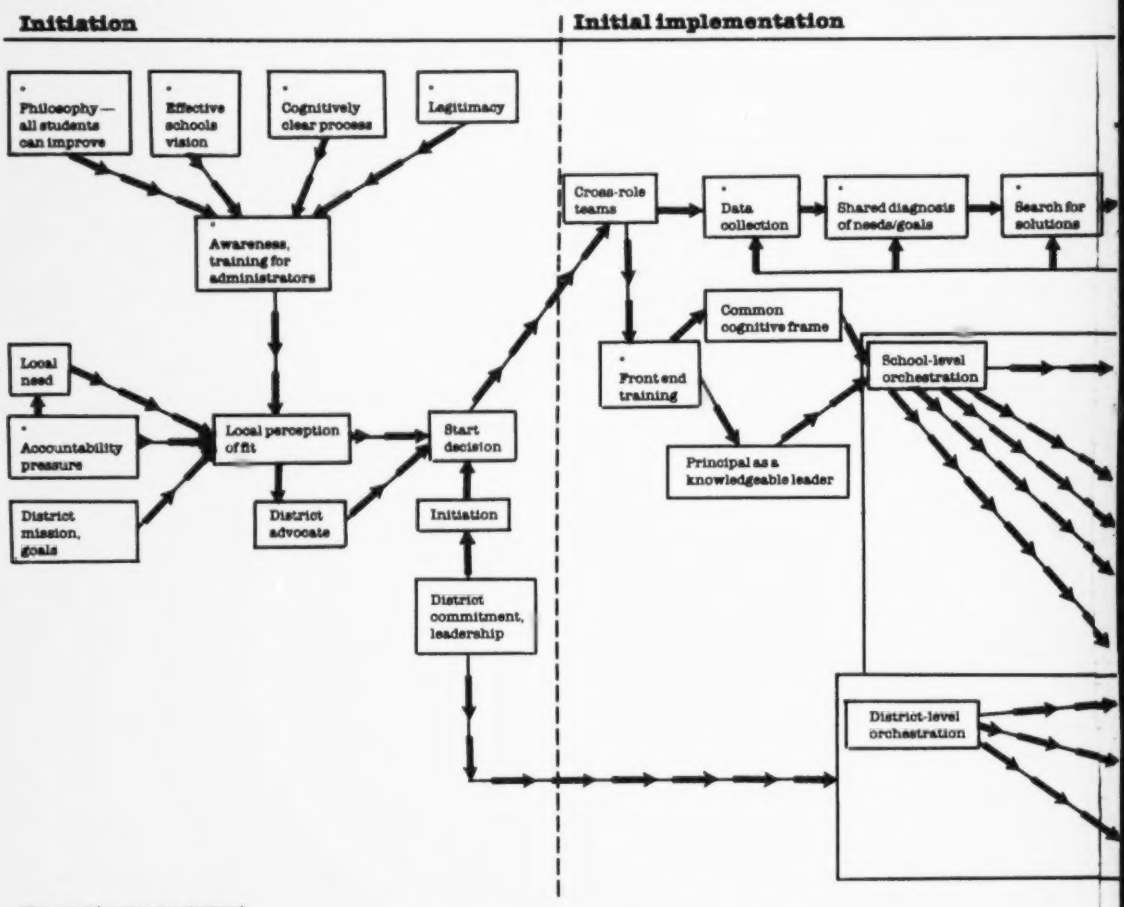
Stage 1: initiation

Our study showed that one of the most important characteristics of the initiation stage in the schoolwide model was **awareness training** for school and district administrators. It was important that they perceived that a state program could help them improve education in their school and/or district.

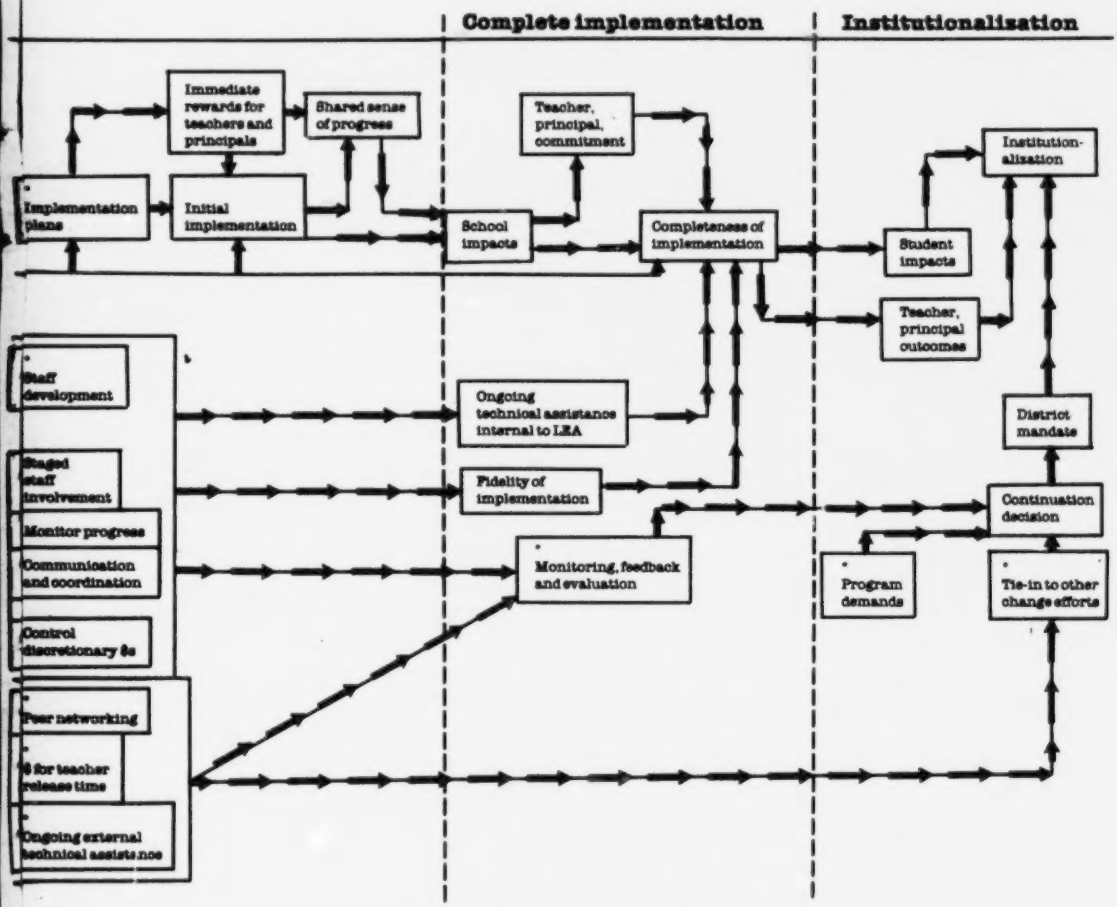
Effective awareness training was built on a **philosophy that all students can improve,** and it provided a **vision of an effective school** based on clearly identified characteristics. Some state programs provided administrators with characteristics derived from the research on effective schools. Other programs let local citizens and educators define the targets of their improvement efforts. In all cases, however, the overriding goal was improved academic achievement.

The receptivity of administrators to training was enhanced by the perceived **legitimacy of the program,** sponsor and trainers. Programs achieved legitimacy when state leaders and recognized experts endorsed them, when they were clearly based on research findings and when trainers were well qualified. Training had to present a **cognitively clear, well-structured process** for, say, establishing a school team, collecting and analyzing data and acting on that analysis to resolve problems. One of the most frequently structured parts of the process was the instrument or method used for initial data collection, e.g., a state questionnaire to identify needs.

Diagram 8.
Four stages of implementation for the schoolwide improvement model



*Potential for state involvement


Complete implementation
Institutionalisation
Immediate rewards for teachers and principals
Shared sense of progress
Teacher, principal, commitment
Institution-alisation
Implementation plans
Initial implementation
School impacts
Completeness of implementation
Student impacts
Teacher, principal outcomes
Staff development
Ongoing technical assistance internal to LEA
District mandate
Staged staff involvement
Fidelity of implementation
Continuation decision
Monitor progress
Communication and coordination
Monitoring, feedback and evaluation
Program demands
Tie-in to other change efforts
Control discretionary $s
Peer networking
$ for teacher release time
Ongoing external technical assistance

Several factors converged with training to heighten administrators' **perception that a process fit local need,** i.e., their perception that a program could indeed help resolve some important school problems. **Accountability pressure** from the state or district often increased the administrators' interest in improving their schools. Pressure came in the form of minimum competency testing in some states; in others, it was the requirement that certain types of citizen involvement occur in schools. In the schools studied, administrators took advantage of these requirements to urge teachers to participate in an improvement effort. The accountability pressure usually was consistent with **local needs** that had already been formally or informally identified — for example, when a school was already receiving complaints about the skills of its students. **A district's mission and goals** also influenced the **perception of fit.** A district that had already established high academic achievement as its mission was especially ready to view the state's program as worthwhile.

A strong **district advocate** was also instrumental in moving the district to a **decision to start** the improvement process. This district advocate tended to be an assistant superintendent or other senior staff member who knew about the research on effective schools and was convinced that, given an effective process, schools could indeed improve. In fact, district leadership proved essential to capitalizing on the convergence of accountability pressure, local needs and the recognition of likely benefits. The most successful programs had **strong support from district leaders.**

Stage 2: initial implementation

Training, staff development and school orchestration characterize initial implementation in the schoolwide improvement model. The first essential step was to establish a **cross-role team** within the school. The team typically was led by a **knowledgeable principal** and included selected teachers and sometimes community members. Team members generally represented a wide range of perspectives yet were willing to work together and were interested in improvement. The teachers on the team were not necessarily the most effective teachers; rather, they were often selected for scheduling convenience or to represent a range of perspectives (e.g., new teachers as well as experienced teachers).

Training teams was extremely important, to ensure that they understood the improvement process and the philosophy that undergirded it. Training helped principals and other team members acquire a **common cognitive framework** — a common understanding of process skills, a common language about process and goals and a deeper belief that all students can improve.

Once teams were trained, they were ready to engage in their major task of **school orchestration.** First they **collected data** to determine problems, needs and goals, often using a questionnaire based on the characteristics of effective schools as well as data on student performance. They then synthesized the data, **diagnosed problems, searched for solutions** and **developed implementation plans.**

The success of initial implementation depended heavily on **school orchestration.** The following activities of the cross-role team seemed most important.

- The team determined what **staff development** was needed for each step of the process. Some training was specifically for team members, some for all school staff. Staff development was very purposeful because it was based on data collected and aimed at helping staff move toward improvement.

- **Staged staff involvement** rather than widespread involvement was an important implementation strategy during the initiation stage. Administrators and teams became committed to the process before broad involvement was undertaken. This staging of involvement showed the staff-at-large that administrators were committed to the effort. It also allowed administrators and the team to gain a deep understanding of core concepts, which resulted in smoother implementation.

- The team **monitored progress** to ensure that the process was moving ahead at a healthy pace and identified problems as they occurred.

- As more and more staff became involved and the process moved through various stages, it was critical that **communication** was good and activities were well **coordinated.**

- Having **control over discretionary dollars** was very important. Teams could determine if funds should be spent for release time for teachers, instructional or other materials, staff training or other options. Being given responsibility for funding decisions also increased the teams' belief that they were trusted to make good decisions.

District orchestration was also important. District roles complemented school roles, leaving control of the process basically in the hands of school staff within the limits set by front-end training. The district played a critical role in making **money available for teacher release time,** in making **external technical assistance** available from the state or other sources and in **establishing networks** of principals. Networks of teams or district staff working on school improvement were also established in some districts.

Also important was the degree to which principals and teachers received **immediate rewards** for developing plans, such as feeling that communication was improving and that important problems were being addressed. A **shared sense of progress** propelled teachers and principals toward complete implementation.

Stage 3: complete implementation

Complete implementation was heavily dependent on visible results, such as reduced friction among teachers, principals and students, more positive attitudes and more participation in the life of the school. These results increased **teacher and principal commitment to the program.**

As implementation continued, three activities became important.

- **Technical assistance,** generally provided by someone within the district. Assistance related sometimes to process, at other times to content (e.g., to instructional techniques). It was not unusual to see external technical assistance decrease or become more specialized as district assistance increased.

- **Fidelity of implementation,** i.e., keeping activities on course and consistent with plans, or purposeful modifications of plans.

- **Monitoring the process** providing feedback to decision makers. Monitoring often became increasingly structured as implementation proceeded. A particularly effective approach was to have an external review team of teachers from other districts visit a school and suggest improvements.

As implementation reached completion, the most frequent positive outcomes were **impacts on the school** as a whole, like clarification of the roles of teachers and administrators, greater flexibility for teachers or improved collegiality among teachers.

Stage 4: institutionalization

Institutionalization occurred when district and school needs, external forces and a specific improvement program came together in a way that produced positive outcomes. One essential outcome **was increased student achievement.** These outcomes often converged with a **district mandate** requiring **continuation of the process** or the participation of additional schools. **Programs tied to other change efforts** appeared more likely to continue. For example, in one state the improvement process was used to implement new state curriculum requirements.

Program demands also affected the likelihood of continuance. Staff needed to feel that the benefits of a program were worth the time and effort committed to it. Programs could not require extreme amounts of time, especially if release time or extra pay were not provided.

How the model works at Sinai High School, California

Sinai High School in California closely follows the schoolwide model described above. It is important to note that California's School Improvement Program (SI) is the most well-financed state school improvement program in the country; Sinai receives about $100,000 annually and the district receives an extra $18,000 for indirect costs.

During **initiation,** awareness training for school administrators came from the district. By state mandate, districts must inform all principals about the School Improvement Project (but participation is voluntary). The district also helped Sinai organize a School Site Council (SSC), a process that helped to build awareness of SI. The SSC is cross-role: principal, teachers, other school personnel, parents and, at the secondary level, pupils participate. The process Sinai followed in developing an improvement program was cognitively clear and well structured. The state stipulated that the improvement plan must identify the skills students need, assess their current skills and needs, develop a three-year plan for addressing needs and outline a system to evaluate the plan. While the start decision was at the school level, both the SSC and LEA had to approve Sinai's plan before implementation could begin. The district showed commitment and leadership by helping to process paperwork, sharing information about successful strategies developed in its SI schools and reviewing at least three components of Sinai's plan each year. (One of those successful strategies was begun at Sinai, a program in clinical teaching and clinical supervision.)

Three forms of state accountability pressure have affected Sinai's program. The state first sought to involve parents in school governance, specifically by requiring that parents be among the members of the school site councils. It was this pressure that produced Sinai's decision to participate in the school improvement program. Then the state sought to develop schoolwide programs for students with special needs, now a major component of Sinai's overall plan. Currently the state wants to improve the curriculum, which meshes with Sinai's historic interest in curriculum innovation and improvement.

During **initial implementation,** the current SI coordinator, an assistant principal backed by a principal who strongly supports SI, trains teachers to develop school improvement proposals and SSC members to conduct component reviews. Fidelity of implementation is required by state law and supported by district and school personnel. The coordinator orchestrates all SI activities and is knowledgeable in all SI processes. The coordinator does, however, delegate substantive issues to departments, a procedure that has helped SI work at the high school level. Staff involvement is widespread at Sinai, thanks in large part to this use of departments. Each department writes an overall set of department goals. Teachers in the department then write specific proposals that the department ranks and sends to the SSC; the SSC then makes makes final funding decisions. It also funds some schoolwide programs (e.g., training in how to deal with an increasingly diverse student body, a program for high-risk students, a counseling program for career opportunities). The SSC's funding of numerous teacher-generated and department-approved proposals unleashes teachers' commitment and energy since all decisions are made quickly and locally. Teachers, department chairs, the SI coordinator and the SSC are, in effect, a cross-role team that functions continuously.

Complete implementation has resulted in several school impacts at Sinai. These include many new curriculum units and updated curriculum guides; the use of computers, video tapes and other types of technology in most curriculum areas; better interpersonal relations among students and between students and staff; and more involvement of parents and the community. Teacher impacts include improved instruction, widespread instructional and curricular innovation, more teamwork and an enhanced sense of professionalism and efficacy. Student impacts include improved test scores and more awareness of career options. Principal impacts include more interaction with parents and greater support for teachers.

Institutionalisation. Now in its seventh year, SI at Sinai is a schoolwide process that has continued through turnovers in school, program and teacher leadership. The program has been demanding because many of its components have addressed curriculum revision. School improvement ties in to current change efforts at the school and state levels. This is especially true now that the state has made improving the curriculum a state priority. The district mandate for annual reviews and the impacts described above have contributed to the continuation of SI through seven years.

A comparison of the two models of school improvement

4

While there are some important differences in the relationships among and sequencing of the variables for the schoolwide and instructional improvement strategies, there is also substantial similarity. This section highlights the major variables, events and activities of each model and identifies key differences for each of the four stages of implementation.

Initiation variables

Table 1 describes the major variables associated with the initiation stage for each school improvement model. (See Diagrams 1 and 2 to review the sequence and relationship among the variables for each model of school improvement.) In many respects, initiation proceeded similarly for both models of school improvement. External accountability pressures, local need, district goals, a positive philosophy embedded in the program and legitimacy of program and sponsor produced a perception of local fit; a perception of fit produced a local program advocate and central-office commitment, which produced a district's decision to participate in the program.

There were also some interesting differences in the initiation stage. First, in schoolwide programs an awareness-building session for key local leaders usually preceded the perception of local fit. Awareness-building also took place in instructional programs (an awareness session was part of Maryland's SITIP program, for example, and Missouri's week-long summer training program built awareness), but it received less emphasis. Second, schoolwide programs were usually based on a clear vision of the elements of an effective school, whereas instructional programs were based on a high-quality training program. "High quality" means that the program was theory-driven, research-based, validated in classrooms and translated into language meaningful to classroom teachers.

Initial implementation variables

At this stage, too, there were many similarities: cross-role teams were created, the central office produced a district orchestration plan, training made principals knowledgeable leaders, the principal developed a school orchestration plan, technical assistance came from sources external to the district, resources (in large part for teacher release time) helped support the effort, a cognitive frame common to

Table 1.
A comparison of two school improvement models — stage 1: initiation

Variable	Instructional model	Schoolwide model
Accountability pressure	An accountability pressure created a local need to improve.	Same
Legitimacy	The program was perceived as being of high quality and the people associated with it were perceived as having expertise.	Same
Philosophy	A philosophy existed that all students could improve and teachers could improve their instructional skills.	A philosophy existed that students could improve by achieving effective schools characteristics.
District advocate, mission, goals	A knowledgeable district advocate developed support within a district and at schools for beginning the state initiative.	Same
Local perception of fit	Teachers and administrators perceived that the state program would help them improve an identified need.	Same
District commitment and leadership	District leadership and commitment to the state program led to a decision to begin the program.	Same
Awareness training	Not present	Awareness training of local educators helped them perceive fit of the program to local needs.
Program intent	Program based on high-quality training program for teachers and administrators with appropriate application.	The program was based on a clear vision of effective schools or a cognitively clear, well-structured planning process.

teachers and administrators was developed and there was some sense of immediate rewards. There are a number of differences, however, in the meaning and sequencing of some variables, and a few variables appear in only one diagram. First, while the sequence of cross-role team, training, common cognitive frame was common to both types of programs, the substance of training differed. In schoolwide programs people were trained to assess needs and develop improvement plans; in instructional programs they were trained in a specific instructional strategy like clinical teaching, active teaching or mastery learning. The quality and sufficiency of training were important to both strategies, in that both content and training techniques were important. In the most successful programs, trainers knew not only content but also effective ways to convey that content. A second difference: processes were more complex in schoolwide programs, in part because they involved more activities — gathering data, analyzing data, searching for solutions and implementing solutions. Indeed, one of many solutions might be an instructional program.

Immediate rewards were important in both types of programs, but the nature of the rewards differed. In the schoolwide programs, rewards were often simply

identification of needs, involvement in the identification process, the sense of empowerment that evolves from involvement or the satisfaction of planning to meet needs. In instructional programs, rewards derived in large part from the power of the instructional program — from the feeling that, finally, there was a way to discuss teaching.

Table 2 identifies the variables associated with initial implementation for the two models.

Complete implementation variables

The two strategies produced both school and individual outcomes, even though one strategy began with school issues and the other with individual issues. It seems that the point of entry does not limit the impact: whether programs target individuals or schools initially, they affect both individuals and schools when they are fully implemented.

Fidelity of implementation and ongoing technical assistance were essential to the complete implementation of both strategies. Fidelity included some administrative pressure for "doing it right" and that pressure was an important variable. But it was pressure accompanied by lots of assistance — coaching teachers and principals as they tried new practices, sought advice on specific problems and needed reassurance as they attempted to change their behavior.

Commitment was an important variable that both preceded complete implementation and evolved from implementation. In other words, commitment was not built "up-front" but instead developed. It developed incrementally, from initial rewards of some type, to an element of success in the middle of the process, to full commitment. The middle element was a shared sense of progress in the schoolwide programs and skills mastery in instructional programs.

Student outcomes — primarily better student performance — contributed to full implementation of both programs. Unless teachers saw that a program, whatever its substance, affected students positively, their interest waned. If student performance was not affected positively, creating commitment or institutionalization was difficult.

In schoolwide programs, peer networking supported complete implementation, perhaps because teachers needed psychological as well as technical support as they attempted to change. Formal peer networking (organizing times for teachers and administrators in one program to interact with teachers and administrators in comparable programs) seemed to serve this dual purpose.

An evaluation variable affected schoolwide strategies. For example, schools in the California program are formally reviewed every three years. At issue is how correctly a school has followed the school and district process and whether improvement activities have had positive impacts on students. Most people interviewed considered this review a critical element of the program. Evaluation was, in a way, built into instructional-based programs: if teachers did not master new skills and these new skills did not improve student performance, programs withered.

Table 3 identifies the variables associated with the complete implementation stage for both school improvement models.

Table 2.
A comparison of two school improvement models — stage 2: initial implementation

Variable	Instructional model	Schoolwide model
District orchestration	Districts carried out necessary management and administrative tasks to begin implementation.	Same
School-level orchestration	Schools needed to have carefully coordinated activities, strategies and tactics for program implementation to be successful. School-level orchestration was led by cross-role teams.	Same
Cross-role teams	A team of central office staff, school administrators and teachers determined how programs would be implemented in each school. They identified staff development needs, monitored progress, coordinated activities, communicated information and controlled discretionary dollars.	Cross-role teams were trained in the process and philosophy of the planning model. The schoolwide process usually included training in data collection, identification of needs, a search for solutions and the development of implementation plans.
Technical assistance and resources	Financial as well as external and internal technical assistance needed to be provided by either the local district, state or outside consultants.	Same
Initial training	It was important that trainers were experts in the substance of the program, had good training skills and modeled the strategies while teaching them.	Cross-role teams were trained in the process and philosophy of the planning model. (See cross-role teams above.)
Principal as knowledgeable leader	From training in the school improvement strategy, principals emerged as experts knowledgeable about program substance as well as about program administration.	Same
Common cognitive frame	Training of cross-role teams resulted in an understanding of the dimensions of the model, its language, philosophy, etc., resulting in a common cognitive frame.	Same
Immediate rewards	Good training provided teachers with a language to describe effective teaching practices resulting in better instruction and communication among teachers.	Rewards were the identification of needs, involvement in the process and the satisfaction of planning to meet identified needs.
Turnkey training	"Training the trainers" created local experts who could spread the program throughout the district or state more easily and with less reliance on outside experts.	Not applicable

Table 3.
A comparison of two school improvement models — stage 3: complete implementation

Variable	Instructional model	Schoolwide model
School impacts	This occurred during stage 4: institutionalization.	Organizational and cultural changes occurred in the school, such as more collegial interactions or developing a process for school improvement.
Skills mastery	Skills mastery resulted from faithful implementation of the instructional model; coaching, school leadership and commitment to the model were also necessary.	Not applicable
Teacher and principal commitment	Commitment resulted from the immediate rewards for school staff produced during initial implementation and skills mastery.	Commitment resulted from visible results of school impacts, such as improved attitudes, less friction among students and teachers or greater participation in school activities.
Teacher and principal outcomes	Skills mastery produced teacher and principal outcomes; teachers improved teacher instructional effectiveness and the principal became a stronger instructional leader.	Outcomes were in terms of school impacts; later impacts on principals, teachers and students appear in stage 4: institutionalization.
Student outcomes	Improved instructional practices led to improved student learning and achievement.	This occurred during stage 4: institutionalization.
Fidelity of implementation	Keeping activities on course and consistent with the model was important to achieve complete implementation.	Same
Technical assistance	Provision of assistance over the period of implementation to get the total program in place; training of administrators, principals and teachers in the use or process of the program.	Same
Monitoring, feedback and evaluation	Not present per se but monitoring, feedback and evaluation could be considered part of coaching during skills mastery.	Monitoring the progress and providing feedback to decision makers helped make program improvements.

Institutionalization variables

The processes of institutionalization were essentially the same for the two strategies, as shown in Table 4. The major difference was that the school impacts in instructional programs took place in the institutionalization stage, a stage that produced individual impacts in schoolwide programs. This difference is, in a sense,

a generic similarity more than a difference. Full implementation in the instructional programs consisted of skills mastery and direct impacts on students, whereas school impacts occurred during institutionalization. Full implementation in the schoolwide programs brought school impacts, whereas impacts on students, teachers and principals came later. The diagrams show that institutionalization emerged when programs had both primary and secondary impacts. Institutionalization probably would not have occurred in the absence of secondary impacts. Put differently, institutionalization is most likely to happen when education improvement interventions have both individual and institutional impact. Institutionalization becomes a matter of solidifying (or ratifying) these changes by concomitant changes in standard operating procedures, i.e., by changing policies, procedures, regulations, requirements or budgeting priorities.

Table 4.
A comparison of two school improvement models — stage 4: institutionalization

Variable	Instructional model	Schoolwide model
School impacts	School impacts resulted from teacher and principal outcomes, student outcomes and full implementation. School impacts could be organizational (focus on instruction or new curriculum policies) or cultural (improved school climate, raised expectations or collegiality).	This occurred in stage 3: complete implementation
Student impacts	Student outcomes occurred in stage 3: complete implementation.	Student impacts resulted from school impacts and complete implementation. Student impacts usually were increased student achievement.
Teacher, principal impacts	Teacher and principal outcomes occurred in stage 3: complete implementation.	Teacher and principal impacts also resulted from school impacts and complete implementation. Impacts were not necessarily improved instructional practice.
Program demands	The benefits of the program had to be worth the time and effort staff spent on it.	Same
Tie-in to other improvement efforts	When school improvement programs were tied to other efforts to change schools, it signalled the importance of the school improvement program.	Same
Decision to continue	A central office or local school board made a decision to continue with the program.	Same
District mandate	Districts frequently required all schools, teachers or principals to become involved in the state school improvement program.	Same
Institutionalization	Activities and requirements of the program were incorporated into the standard operating procedures of the district and school.	Same

State and local conditions for school improvement

5

Previous chapters have described key variables and events that must take place for a school improvement program to be successfully implemented. However, state and local conditions affected how programs operated locally. This chapter identifies several important state and local conditions and discusses how they constrain or sustain local implementation.

State context

Table 5 displays two categories of state variables associated with successful state school improvement programs: general political/economic variables outside the SEA and variables inside the SEA.

Several general political/economic conditions outside the SEA facilitated school improvement. One is some type of state pressure to change, reform or improve education. In the states studied, this pressure derived from new state testing programs, strengthened accountability requirements, and, more recently, education reform objectives. More important than the type of pressure was the fact that it existed. Local educators identified pressure as a mechanism that helped catalyze a perception of local need. Principals and central office staff were able to use outside pressure to reinforce initiatives to raise standards and improve student achievement. As one administrator stated, "Local administrators have known for a long time what changes are needed, but it is much easier to generate a collegial environment focused on change within the district when the 'bad guy' is on the outside."

A second condition was the support of political leaders such as governors and legislatures. Most programs were initiated by state education departments, usually without formal legislative sanction. Those supported by governors and legislatures grew in size and strength. The California program's multimillion dollar funding would be impossible without legislative sanction, for example. In Arkansas, the Program for Effective Teaching (PET) struggled for support in its third and fourth years, until the legislature and the governor sanctioned new state education leadership.

How a state improvement program respects the traditional balance of state/local control of an education system is another state factor. Curiously, whether programs were voluntary or mandatory bore little relationship to the traditional patterns of state/local control: programs were voluntary in centralist California and mandatory in local-control Colorado, for example. Where programs were mandatory they were,

Table 5.
State conditions that facilitate school improvement

Outside the SEA

- State pressure (testing, accountability, education reform) to change
- Support from political leaders — governors, legislators
- Availability of discretionary money

Inside the SEA

- SEA advocate for the improvement strategy, backed by chief state school officer
- Promoting belief structure, including:
  - Collegial, positive working relationships between the SEA and LEA
  - Local capacity building
  - Providing technical assistance
  - A philosophy that all children can learn
- Technical assistance
- Organizational structure with:
  - Adequate staff
  - Program staff as an identified unit
  - Fiscal resources to sustain the program
  - Links to other SEA efforts affecting schools

however, linked to traditional state regulatory functions — to school accreditation in Colorado and Pennsylvania and to teacher certification in Georgia. Programs not linked directly to traditional regulatory functions were voluntary.

The implication might be that state school improvement initiatives should be voluntary in their initial years as states seek to assess their impact and districts experience their effects. The lesson also might be that initiatives that seek to enhance local capacity for improving education, an undergirding goal of all programs studied, are appropriately voluntary. Education improvement requires commitment to expend energy to improve skills, which is difficult to mandate.

State programs varied in the latitude given local participants. States generally required adherence to process and allowed participants some choice of content. Processes were more firmly specified in the schoolwide programs, especially those in California, Colorado and Ohio, where participants determined the particular targets of improvement. However, the most successful local programs focused on core education activities. In fact, three states are moving to constrain program content; Connecticut and Ohio are stressing student achievement in the basic skills, and California is stressing curriculum.

The availability of discretionary funds affected program success. Although amounts were large only in California, where schools received an extra $106 per pupil, discretionary funds were important generally. Most local efforts required extra time from teachers, training for staff, the development or purchase of materials and the use of consultants. Teachers are, not surprisingly, more willing to undertake improvement efforts, especially curriculum development, if they are paid for their extra effort. Extra pay is not only compensation for extra work but also a sign that the district and the state value the extra work. The availability of discretinary dollars also gave school teams a sense of empowerment that was important to

building commitment. When a state does not provide extra funds, only districts with excess local funds — usually the wealthy districts — can pay for school improvement.

As shown in Table 5, four aspects of the organization and staffing within state departments of education were associated with program success.

Political support within the department of education was as important as political support outside the department. The strongest programs had a strong SEA advocate, either the chief state school officer or someone backed by the chief. The Arkansas PET program, South Carolina's PET and Effective Schools Program, and Connecticut's and Ohio's Effective Schools projects are examples. That these programs received priority attention within the SEA gave them credibility locally and strengthened them. When the chief was not an active supporter, outside general political support also was nonexistent, and the programs became vulnerable to other demands for scarce resources. When support expanded within the SEA, the program was strengthened.

Programs also were stronger where SEAs saw them as collegial ventures rather than as bureaucratic necessities. When SEAs made staff available to help schools and districts, the emphasis was on working together, sometimes setting a new style for SEA/LEA interaction.

A collegial relationship was particularly important to small districts. They were more likely to turn to the SEA for support than were large districts, primarily because large districts tended to have staff expertise at least equal to expertise in the SEA. For example, the assistant superintendent of a small rural district in Ohio emphasized that a major benefit of attending the summer administrators' academy was getting acquainted with SEA staff who could be contacted at a later time. This assistant superintendent was particularly encouraged by SEA staff who would call her occasionally, simply to see how things were going. In large districts, influence often flowed the other way. That is, the approaches to school improvement used by these districts often served as sources of information for the SEA. SEA programs were greatly strengthened where SEA staff recognized they could learn from the strategies of progressive districts.

Resources — money and knowledgeable people — made a difference. State programs were strengthened when funds were ample, staff had substantive and process skills and at least some resources were available to schools (if only just technical assistance) as they worked on implementation.

An effort to develop local capacity and belief in the importance of technical assistance was central to all the programs studied. The Ohio Academy for School Improvement Strategies was designed to teach principals administrative skills that are fundamental to school improvement and to leadership in the broadest sense, for example. The California, Colorado, Ohio and Connecticut programs trained cross-role teams at the school level to identify and solve their own problems — a key aspect of building local capacity.

SEA structure and organization also made a difference. When programs were adequately staffed, placed in a separate unit, linked to or integrated with other SEA improvement efforts, and supported over time, local impact was enhanced. When these elements were absent, local impact suffered.

Local conditions

Table 6 shows variables related to local conditions that affect the success of school improvement programs.

Table 6.
Local conditions that facilitate school improvement

- Lack of turmoil
- Lack of innovation overload
- Small school size and complexity
- Stability of staff and leaders
- Good labor/management relations

Turmoil, innovation overload, large school size and school complexity negatively affected the implementation of state programs.

Turmoil included local factors that strained relationships, such as parent and community opposition, fragmentation caused by court-ordered busing, school closings caused by declining enrollments or staff cuts caused by diminished budgets. In general, these types of conditions were absent from the schools visited.

"Innovation overload" means that too many changes were made simultaneously. In the most successful schools, the program studied was the major education improvement activity, or a substantial part of a larger activity. In less successful schools, the presence of a number of other, somewhat unrelated improvement efforts diminished success. Attempting too many innovations at one time not only strained capacity to respond but also signaled confusion about priorities. In a number of schools, teachers welcomed the focus on a single state improvement program as a sign that districts and principals had set a priority; commitment to the single program for more than a single year reinforced the message.

Large schools had more difficulty implementing education improvement programs, regardless of the type, than small schools. Secondary schools generally had more difficulty than elementary schools. Attending to the details of an improvement effort was easier when fewer people were involved. The increased complexity of secondary schools did not preclude education improvement, but it did make improvement more complex. In successful secondary school programs, the organization of the school into departments was recognized and attended to.

District size further complicated the issue of school size. Even when a program has high priority in a large central office, all program directors may not be equally supportive. High school department heads who are in contact with many central-office curriculum coordinators may get mixed messages. Since elementary schools have fewer administrators and thus fewer people in formal contact with the central office, the potential for mixed messages is lessened.

Two variables positively associated with program implementation were stability of staff and leaders and good labor/management relations. Put differently, staff and leadership turnover made program implementation more difficult. School and district orchestration suffered. In the instructional programs, skill mastery was more difficult to develop since new people constantly had to learn new skills. Schoolwide programs, which required careful coordination of their many, interrelated activities, became even more complex. Since collegiality was important to both types of programs, and since both depended on cross-role teams, strained labor/management relations impeded implementation.

State education agency actions that support school improvement

6

The state education agency plays a critical role in the successful adoption and implementation of a statewide school improvement program. Previous descriptions of the two school improvement models demonstrate numerous places in the selection, development and implementation of a school improvement program where state education agencies can promote school improvement statewide. Below is a list of recommended state actions that should be taken in conjunction with other state and local leaders to support school improvement. Appendix B contains a detailed checklist of successful school improvement programs. These lists, taken together, form the basis of establishing and maintaining successful statewide school improvement programs.

1. Make school improvement a high priority in the state.

- Use national attention to education reform and public support for education to make school improvement a high priority.
- Keep the idea of educational excellence high on the public agenda and pay attention to the motivation for improvement.
- Press for high standards and educational reform by establishing or strengthening programs such as testing, accountability processes and student requirements that keep pressure on schools to improve the educational process.

2. Get support for school improvement.

- Encourage the support of top leadership at all levels — in the state (governor, legislators, chief and program heads), in the district and in the schools. District leaders are important in orchestrating and supporting the programs and principals and teachers become advocates and implementers.
- Balance compliance and assistance strategies. An element of volunteerism is important because local ownership is necessary for success. But states can require program initiation and faithful implementation.
- Provide discretionary resources — funds for staff development, release time and materials. Adequate resources make programs possible; without state resources, school improvement occurs only in districts with surplus funds. Encourage the reallocation of resources.

- Ensure that the program is properly supported within the SEA — that it is adequately staffed, that adequate resources are provided and that it is integrated with other state improvement efforts. Most successful programs have a separate unit in the SEA that has strong ties to other state programs.

3. Select a valid school improvement program for use.

- Support the development of a high-quality program or process. If an instructional model is selected, it should have a proven and successful track record and provide a clear, cohesive, well-structured approach to core educational issues such as academic performance, curriculum and instructional effectiveness. It should contain elements of effective schools.

- Programs should contain a philosophy that teachers can improve their instructional skills and that students can improve their academic performance.

4. Facilitate implementation at the local level.

- Get local administrators committed to an improvement strategy.

- Encourage teams composed of the principal and selected teachers to carry out the strategy within each school with district support.

- Strongly support technical assistance, coaching and encouragement. Make sure that schools get ample, high-quality, ongoing technical assistance. Support top-notch training by trainers skilled in the program and the training process.

- Be flexible. Adjust technical assistance and other types of help to the specific problems that arise as a strategy is used.

- Ensure that support is provided throughout all stages of the change process.

- Provide a process that encourages schools to continue to change.

- Develop a positive and collegial working relationship between SEA and local educators for school improvement efforts. Successful districts see joint ventures with the SEA as collegial rather than bureaucratic.

- Understand the conditions that can help or hinder implementation at the local level. Schools in turmoil or those experiencing "innovation overload" have difficulty in successfully implementing a school improvement program. However, schools with stable leadership and good relationships between management and labor have good chances for success.

5. Build networks.

- Identify and publicize districts and schools that experience success.

- Support conferences or other networks where personnel from successful districts can share their experiences with others.

- Use the experience of leaders in successful schools and districts to help develop the skills of SEA staff who are responsible for technical assistance.

Appendices

Descriptions of school improvement programs in 10 states and state contacts

A

More detailed descriptions of the school improvement programs included in this study appear below. The programs are divided into two general types: schoolwide improvement programs, which usually involve the whole school in a planning process, and instructional school improvement programs, which focus on improved teaching skills.

Schoolwide improvement programs

California: school improvement program

The California school improvement program is essentially a planning process in which schools receive state funds to design and implement a school-based education improvement program. The major objective is to create a local capacity for continuous improvement in all schools in the state, in addition to involving parents and the community in school governance. By making the program school-based and requiring the development of a plan in which all school professionals are involved, the program also seeks to develop teacher commitment to ongoing improvement efforts. Further, school improvement seeks to have schools develop integrated, schoolwide programs that provide mutually reinforcing, rather than fragmented, services to each individual child. The program requires that the improvement effort, and its accompanying expenditures, be governed by a school council composed of the principal, teachers, parents and community members and, in high schools, students.

The key elements of the planning process include: (1) identifying the skills and knowledge students should have; (2) assessing the school's program against those goals; (3) developing a three-year plan to improve weak areas, with specific objectives and strategies; (4) creating a system to monitor and evaluate program activities; and (5) having a clear implementation strategy.

The program also is subject to periodic review (every three years) by a team of outside observers. Following this, the plan is revised for the next three years.

The SEA has a stated objective of getting all schools into school improvement; however, participation in the program is voluntary. Currently, more than half the state's schools are involved. (The program was started about 13 years ago.) One important aspect of the program is that it has ample state funding: $106 per pupil

per year. Schools are encouraged to use the money to purchase supports for school improvement, such as consultants, materials, trainers, etc.

While local funding has remained high, the SEA role has been cut back. Formerly, there were 100 SEA staff working on school improvement; now there are only two. However, the SEA continues to develop materials, and the current focus is on training trainers who will in turn train local people in the current directions and program review procedures being applied to school improvement.

One of the current directions is to focus the planning and resources on curriculum reform. Thus, school improvement itself is evolving to accommodate changes in the state education agenda. Because of its ability to evolve, plus the fairly significant level of funding, school improvement will probably remain strong in California.

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Colorado: accountability program and cluster program

School improvement through the Accountability Program in Colorado uses a planning process that involves schools and districts in planning and priority setting, i.e., identifying their own needs and proposing ways to meet them. The central theme is that individual schools can become self-renewing institutions, capable of systematically and rationally modifying themselves in response to the needs of pupils, staff and community. The planning process is part of state-mandated accountability requirements, based on three major assumptions: (1) there should be widespread involvement in local school decision making; (2) responsibility for planning/implementing priority improvements should rest with local educators; and (3) districts have a duty to disseminate results of an agreed-upon improvement to the general public.

The planning process emphasizes priority setting, is responsive to citizen input at each stage of the process, is designed to operate at both district and school level interactively and provides for action plans to be tied to both district and school-level priorities.

The accountability process in Colorado is mandated for all schools and districts. Few state resources are available. There are, however, some staff in the SEA who monitor accountability and who provide technical assistance to schools/districts.

The basic accountability process is an action-planning system that consists of six steps. These steps are recommended for use at both the school and district level. The six steps include the following: (1) asking the people — a needs and strengths assessment; (2) priority-setting — from the identified needs and strengths; (3) developing action plans to respond to the agreed-upon priorities; (4) implementing the action plans; (5) evaluating the impact of plan activities; and (6) reporting the results of plan activities to the public.

At the school and district levels, accountability committees oversee the process. They are of a cross-role nature, i.e., composed of teachers, principals, parents, etc.,

to promote collegiality and a sense of ownership among all sectors of the school and community.

The accountability program requires that all districts and schools engage in an active planning process that is clear and well structured. However, no suggestions about what to plan or how to implement the plan are given. In each district and school, the program's success is directly tied to local success in using the six-step process to take on substantive problems that are identified locally. Not only does there have to be a local will to resolve the problems that have been identified, but also there must be a group of local persons who have the skill to carry out the change process to resolve the problems at hand. A great deal of local latitude and choice is allowed in implementing the accountability program, and schools and districts vary in how they use the planning process.

The Colorado Cluster Program encourages the formation of voluntary associations of several (usually 5–15) schools in the same geographic area to work together on an agreed-upon theme or concept. (Current themes include: using quality indicators for school improvement, improving school climate, using technology to improve instruction and using individually guided education.) The SEA helps in the formation of the cluster and provides a limited amount of ongoing technical assistance, but the cluster is managed by its own members and is seen as a long-term mutual support system.

The SEA has developed guidelines for clusters; among these, participating schools must commit to belong to the cluster for three years and work on at least one major school improvement project related to the cluster's theme. In connection with this, schools must allow time for their staff to engage in the improvement effort. The district superintendent and board are expected to support a school's cluster activities, and to communicate these activities to noncluster schools.

The SEA also helps facilitate the establishment of a "resource hub" for each cluster. This should include various consultants or experts (e.g., SEA staff and university representatives) who can introduce research findings that can help guide school improvement efforts.

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Connecticut: school effectiveness project

The Connecticut School Effectiveness Project (SEP) is a voluntary planning process intended to incorporate into schools the seven characteristics of effective schools. These are defined as: (1) a safe and orderly environment, (2) a clear school mission, (3) instructional leadership by the principal, (4) high expectations for students and staff, (5) opportunity to learn and student time on task, (6) frequent monitoring of student progress and (7) good home-school relations.

The planning process is coherent and clearly articulated. Schools receive technical assistance from the SEA to implement the process, but the amount of assistance decreases as time goes by and schools become more involved. (The SEA program

staff for school effectiveness is fairly small: eight full-time and four part-time.) The steps in the planning process include: (1) a schoolwide needs assessment is conducted by the SEA through a full school staff questionnaire and some interviews; (2) data from the assessment is analyzed by the SEA and given to the school's faculty; (3) a core planning team of teachers and administrators (five to seven people, including the principal) work with SEA staff at a two-day retreat to identify and prioritize problems; and (4) the planning team presents results to the faculty who form themselves into problem-solving teams to develop solutions to the problems and then implement them. This process is designed to be completed in two years, after which results are evaluated, a school's needs reassessed and the cycle is repeated.

Because SEP is voluntary, there are certain requirements before a school can become involved. First of all, the SEA staff communicates with the principal of a school to secure his/her commitment to SEP. If this is successful, the school's faculty is presented with information on SEP for a vote; a 51% majority must vote in favor before a school can become involved.

In the past, most schools have concentrated their planning and problem-solving on areas such as administration/staff communication, student discipline and behavior, building maintenance and student attendance. Currently, the SEA is trying to help SEP schools focus on the following topics: (1) increased student achievement, (2) principal leadership, (3) problem-solving capacity at the building level, (4) improved staff instructional skills and (5) improved staff/administration communication.

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Ohio: effective schools program

The state of Ohio has developed an effective schools planning process. The goal is to promote and instill effective schools characteristics and ultimately to increase student achievement. Ohio defines the characteristics of effective schools as follows: (1) a sense of mission, (2) strong building leadership, (3) high expectations for all students and staff, (4) frequent monitoring of student progress, (5) a positive learning climate, (6) sufficient opportunity for learning and (7) parent/community involvement.

The effective schools program model has four underlying assumptions: (1) all children can learn; (2) increased academic achievement is the mark of effectiveness; (3) leadership begins at the individual school level; and (4) school improvement plans must be tailored to the needs of the students, teachers and administrators.

The process for achieving effective schools characteristics and increased achievement is based on collegial decision making combined with a systematic planning process. The process involves the following steps: form a principal-led team, which should include all segments of the school community (the state holds summer workshops for principals to help develop their leadership skills); develop and conduct a needs assessment; share needs assessment with total staff; develop and

implement the action plan based on identified needs; and continually assess and evaluate of the action plan.

In addition to the acquisition of effective schools characteristics, the SEA staff see the program as a means for the SEA to build better working relations with locals and to infuse more of a technical assistance orientation into other components of the SEA.

From the state perspective, entry into the effective schools program is voluntary for districts and schools (some districts, however, require all or part of their schools to participate). Furthermore, the general model allows quite a bit of latitude at the local level for those electing to participate. The superintendent and the principal usually attend a training session to ensure their commitment to the process, but beyond that, there is great flexibility in how things are implemented.

The SEA in Ohio has concentrated the greatest portion of its efforts on getting schools into the program and training principals, i.e., the initiation phase. The primary means is through a week-long summer institute. Fewer resources are put into ongoing technical assistance, monitoring or evaluating the program.

Funds are available for districts to become involved in the activities. There are specially designated funds through the state staff development route, and periodically the state has provided several thousand dollars to individual schools to get up and running on the program. Furthermore, the summer training institute for principals emphasizes building peer relationships among principals and recognizing outstanding performers rather than dependence on SEA staff. Former participants who have gone home and applied what they have learned serve as presenters and discussion leaders in subsequent sessions.

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Pennsylvania: long-range planning for school improvement

Pennsylvania's Long Range Planning for School Improvement (LRPSI) is a new variation of a familiar 17-year-old mandated planning process used throughout the state, which includes the state's 501 school districts, as well as the 80+ area vocational technical schools. School improvement, the new part of LRPSI, requires schools to select 2 or 3 of Pennsylvania's 12 quality education goals using a five-step process: (1) conducting a needs assessment, (2) identifying problems, (3) developing action plan, (4) implementing the action plan and (5) evaluating the results.

Districts have entered the five-year planning process in five waves. At present, the first-wave schools have just completed their implementation cycle and are now in their fifth — or evaluation — year.

The department of education has prepared a series of guides to assist districts and schools in each phase of Long Range Planning. Furthermore, staff volunteers act as field representatives to participating districts; and a large percentage of state

department personnel, along with technological resources, have been organized into a technical assistance system. This has been combined with technical assistance from intermediate units and "pairing relationships" with institutions of higher education. The department of education also maintains a resource system to provide instructional and training materials, a personnel file, a data bank and descriptions of effective projects. A new service now being provided is a computerized data file on the many partnerships between industry and local school systems that now exist throughout the state.

The program requires planning at the school as well as the district level, which distinguishes it from earlier planning programs in Pennsylvania. The outcomes intended are: (1) improved student growth in locally determined areas; (2) increased school capacity to engage in systematic planning; (3) increased management efficiency; and (4) staff capability to assess needs, develop responses, implement and evaluate. When districts enter the school improvement process, a dollar amount is awarded to help offset the costs of long-range planning preparation. For districts with 1,500 students or less, there is a flat award of $1,500; for districts over 1,500 students, the amount is $1.00 per student.

Recently the legislature has focused the planning process directly into the area of improved student achievement, which will be evaluated by the state-mandated testing program.

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Instructional school improvement programs

Arkansas: program for effective teaching

The Arkansas Program for Effective Teaching (PET), an inservice training program, focuses on teachers' instructional effectiveness and principals' and administrators' instructional supervision skills. The ultimate goal is increased student achievement. It draws on Bloom's mastery learning, Madeline Hunter's clinical teaching and clinical supervision and the effective teaching research. The effective teaching program provides training in six areas: (1) selecting appropriate learning objectives using the Bloom taxonomy; (2) analyzing tasks, i.e., analyzing a learning objective to identify all the requisite skills needed to accomplish the objective; (3) teaching to the objective involving four components: explaining, questioning, doing related activities and responding to learners; (4) maintaining the learner's focus by providing a "mind-set" for the objective (a reason for learning); (5) monitoring learner progress; and (6) includes the major components of learning: motivation, reinforcement, retention and transfer.

PET training usually covers about a six-week cycle with six full days of instruction and at least four practice sessions. The state objectives for PET are: (1) to develop a cadre of trainers who can provide training for both teachers and principals in local districts (people attend three training cycles before they are certified as trainers; this is the "trainer of trainers" approach); (2) to develop a set of activities to maintain, reinforce and expand the skills of trainers over time; (3) to teach, in cooperation with local districts, all principals and other teacher supervisors to

observe and counsel a teacher on his/her instructional effectiveness (two training cycles are needed to be certified as an observer); and (4) to encourage each local district to develop a system for training all teachers in clinical teaching and all principals in clinical supervision, and to develop local mechanisms to maintain and reinforce the skills of both teachers and principals.

The state developed the program about five years ago and did much of the initial training, but now districts are expected to keep the program going and local districts provide the funding for effective teaching (for example, funds to hire substitutes for teachers who are attending training cycles). Furthermore, there are very few SEA staff working on PET, which limits the amount of technical assistance to districts. However, even though resources are limited and participation is voluntary, three-fourths of the state's teachers and principals have been trained in PET.

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Georgia: teacher appraisal program

To the Georgia Department of Education, the key to school improvement lies more with the fundamental competence of the teaching force than with any other single variable associated with schools. Relying on the assumptions that teaching competence is fundamental to increasing student achievement, that teaching competence is reasonably defined by research on teaching and that this competence can be developed and accurately assessed, the SEA initiated the first statewide program of performance-based certification in the country.

The performance-based certification program is a two-part program, with part one composed of 28 teaching fields content tests, and part two composed of a highly structured regional system for the on-the-job appraisal of the actual teaching performance of all beginning teachers. The 28 content tests were developed and validated to be job-related and to reflect the minimum content knowledge necessary to teach in Georgia classrooms. The objectives, content and minimum scores were determined by a job analysis of each teaching certification field. The Teacher Performance Assessment Instruments (TPAI) were designed as five separate instruments, to address 14 essential competencies found in research on effective instruction and judged by Georgia educators to be essential performance areas in which all teachers should teach with minimum effectiveness. Each competency is categorized into several behavioral descriptors of that competency; each descriptor provides several indicators of the level of performance of that descriptor. Successful completion of the TPAI requires that a teacher perform in each competency area at a minimum specified level in order to receive a certificate.

The assessment begins during the teacher's last year in college when he/she is eligible to take the written test. During the first year of teaching, three-member evaluation teams composed of a school administrator, a teaching peer and a regional assessment center staff member evaluate the teacher. Seventeen regional assessment centers are state-funded and are responsible for coordinating all assessments of beginning teachers. Assessment center staff have trained all principals in the use of the TPAI and provided evaluator training for all personnel who serve on evaluation teams. Center personnel are also responsible for all record-keeping pertaining to assessment for certification. Many school districts in Georgia have

adopted the teaching criteria found in the TPAI for use in ongoing teacher evaluation for all teachers in their district.

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Maryland: school improvement through instructional process

The School Improvement Through Instructional Process (SITIP) program is designed to provide districts with an instructional improvement program. The impetus for initiating SITIP was a statewide competency testing program that required districts to help students who were below specified competency levels. SITIP is a method for districts to improve instruction, and ultimately, test scores. Other SITIP goals are improved teacher and student attitudes, and improved communication (between the SEA and districts, between districts and schools, and between and within individual schools).

Districts may choose one (or more) of four SITIP models, as follows: (1) Active Teaching in which deliberate structure is given to the class period and the approach to a lesson; (2) Mastery Learning, which combines curriculum alignment and Diagnostic/Prescriptive Instruction; (3) Student Team Learning, which uses peer tutoring and team comprehension to facilitate learning; and (4) Teaching Variables, which specifically improves the content and time dimensions of teaching.

Participation in SITIP by districts and schools is voluntary. If a district decides to participate, it not only chooses the model, but also the scope of implementation (i.e., number of teachers, students, grades and schools). Staff prepare a plan of implementation and if approved by the SEA, the district receives a matching grant from the state. Current grants are between $1,000 and $3,000.

The state role is to train district teams in the model selected, review and approve proposals, assist them to plan and implement a project and provide continuous support in terms of locating expertise and networking. There are eight technical assisters at the SEA, two for each model, each working 10% of the time in SITIP.

SITIP is built on a planned change approach. There is cross-role planning and implementation (district teams involve teachers, principal(s) and central office personnel) that help develop a sense of ownership; planning is interactive with training, which helps the SEA adapt the model to local needs; training and technical assistance are provided during the implementation; and each district has some degree of choice about the nature and extent of involvement.

The choice factor means that districts structure their own projects and some choose to implement a model in just one school or grade. The SEA hopes that the teams involved will train others in the district to implement the model (turnkey training).

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Missouri: instructional management system

The Instructional Management System (IMS) in Missouri is an instructional approach based upon the mastery learning methods advocated by Benjamin Bloom and others. IMS is a way of organizing instruction and managing learning in the classroom. Its goal is to assure that instructional objectives are clearly defined for each subject and grade; all students have the time they need to master objectives; and teachers, students and parents know precisely what has been achieved and what remains to be done. The primary purpose of the approach is a higher level of mastery of basic skills (primarily in reading and mathematics) by all students; higher achievement test scores are anticipated. Two educational premises undergird the concept of mastery learning: (1) all students can learn, and this is accomplished by varying the amounts of time needed by each student to master an objective; and (2) instruction should be individualized to the extent that each student experiences more success than failure.

In addition to mastery learning, the purpose of IMS is to enhance various other effective schools characteristics, such as improved curriculum alignment, higher teacher expectations for students, strong instructional leadership from the principal and increased parental involvement.

Participation in IMS is voluntary. Furthermore, although IMS is a defined approach for teachers to use in the classroom, the choice of grades/subjects to be involved, plus a definition of objectives and selection of appropriate materials, is left to the discretion of district people.

Local resources are the main source of funding for IMS. In the SEA, only two staff people work on IMS — thus limiting the availability of technical assistance. However, the SEA does hold one-week workshops for new participants (i.e., superintendents and principals mainly) when they initiate an IMS program in their district.

IMS can be viewed as both an instructional approach and a schoolwide or districtwide improvement process. Steps include: (1) assess current district practices and select subjects and grades for Instructional Management introduction, (2) adopt district goals and objectives, (3) develop learning objectives for each grade and/or subject included in the system (based on the district objectives), (4) establish performance standards and evaluation procedures. Other steps to be undertaken concurrently include: (5) plan teaching strategies, (6) develop a record-keeping system to track pupil progress, (7) develop a supervision process (for supervisors to assist teachers and to insure communication between supervisors and teachers) and (8) adopt an evaluation process for the school board (this should include testing and assessment so that data can be used by the school board to reassess the district's progress and make adjustments; the public should be kept informed and citizens should be involved in this reassessment process).

SEA staff recently saw the need for more concentrated technical assistance to districts, and targeted 17 districts as "lighthouse" districts that would receive help at all phases of IMS. These "lighthouses" are expected to help other districts.

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South Carolina: education improvement act

Much of the impetus toward school improvement in South Carolina has come from educators working with legislators to create an awareness of the educational needs in the state and to legislate standards and programs and to fund them appropriately. The Education Finance Act of 1977 changed the educational funding from a flat grant system to one of weighted student classifications and required schools to conduct an annual planning process that was submitted to the Accreditation Section of the State Department. Further, the Basic Skills Assessment Act of 1978 caused schools to teach to statewide objectives in the basic skill areas and created a state basic skills testing program. The Education Improvement Act of 1984 focused on the following areas: (1) raising student performance by increasing standards, (2) strengthening the teaching and testing of basic skills, (3) elevating the teaching profession by strengthening teacher training, evaluation and compensation, (4) improving leadership, management and fiscal efficiency of schools at all levels, (5) implementing strict quality controls and rewarding productivity, (6) creating more effective partnerships among schools, parents, community and business and (7) providing school buildings conducive to improved student learning. In order to make school improvement a viable process, South Carolina is using three major thrusts: (1) the Administrator's Leadership Academy, (2) the School Improvement Process and (3) the Program for Effective Teaching (PET).

The South Carolina Administrator's Leadership Academy promotes quality education leadership by providing continuing professional development and diversified services for public school administrators. Workshops, scheduled frequently and based on an annual needs assessment, include programs in the following areas: management skill development, current issues and problem solving. The academy operates the South Carolina Assessment Center under the auspices of the National Association of Secondary School Principals Assessment Center. This process aides districts in selecting, promoting and training entry-level school administrators. Other related academy programs include the "Springfield" simulations, the Superintendency Internship Program, the Principal Apprenticeship Program and a Business and Industry liaison that capitalizes on corporate firms with quality in-house training that they are willing to share with school administrators.

The School Improvement Process is based on the effective schools research and the premise that all students can learn. South Carolina has adopted six Indicators of Effectiveness: (1) positive school climate, (2) instructional leadership of the principal, (3) emphasis on academics with particular emphasis on the basic skills, (4) high expectations related to student achievement, (5) frequent monitoring of student progress and its utilization in curriculum planning and (6) positive home/school relations.

The School Improvement Process includes training by the state department of education in the effective schools process for schools and districts. The state department of education has developed and published a user's guide for all public school administrators and is developing a train-the-trainer model. The state requires an annual district and school improvement and staff development report.

The Program for Effective Teaching in South Carolina is a school improvement model designed to improve instructional skills of teachers and the instructional supervision skills of principals. PET in South Carolina is based on the theories of Dr. Madeline Hunter and the practices of Dr. Don Roberts, former superintendent in Newport News, Virginia, and former state superintendent in Arkansas, respectively. PET is a labor- and time-intensive process: it requires two trainers six weeks to train 24 participants. A minimum of three cycles of six weeks each is required to train trainers. One who has completed three cycles may then be recommended as a trainer. The training consists of modeling and practicing five instructional skills and Bloom's Taxonomy. The five instructional skills are: (1) select the objective at the appropriate level of difficulty, (2) teach to the objective, (3) maintain the focus of the learner on the learning, (4) monitor the learner's progress and adjust if necessary and (5) use without abuse of the principles of learning. Behavioral change is promoted through a clinical supervision model based on Goldhammar's work. Over 8,000 teachers and school and district administrators have been trained in PET in continuing cycles.

In addition to the Program for Effective Teaching, South Carolina has nine other state-approved staff development programs for school improvement.

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State school improvement programs checklist

B

Use this checklist as a tool to review existing state school improvement programs or as a list of suggested characteristics when developing a new program.

A. Conceptual and Organisational Framework of the Program

1. An instructional school improvement program contains the following features:

   ___ It is a high-quality program that is legitimate, valid and research-based.

   ___ It requires technical mastery of the skills involved.

   ___ Turnkey training is used to quickly develop local experts.

   ___ The program is used only for the purposes for which it was developed.

2. A schoolwide improvement program contains the following features:

   ___ Awareness training for administrators

   ___ A planning process that is well-defined, clear and structured

   ___ The formation of cross-role teams that receive pretraining regarding the process, people's roles, developing a common language and the program philosophy

   ___ A provision to establish networks among principals from several schools within or across districts

   ___ A design that produces immediate, positive results, especially for teachers and principals

   ___ A system to monitor and evaluate the process and provide feedback to decision makers

3. The program contains an underlying philosophy that:

   ___ Teachers can improve their instructional skills and students can improve their academic performance

___ Districts have the capacity to change and improve and a collegial, positive working relationship between SEA/LEA provides the best climate for schools to use school improvement strategies

___ 4. The program focuses on core education issues such as improved student achievement and better curriculum and instruction.

___ 5. The program takes into account the balance between state and local control.

___ 6. The program combines compliance and assistance strategies in a carefully balanced fashion.

___ 7. The program is supported within the state education agency, is adequately staffed, has adequate resources and is housed in a separate unit within the SEA.

___ 8. The program has strong ties to other state education agency improvement programs.

B. State Efforts To Initiate and Sustain the Program

___ 1. The program is supported by top education leadership in the state, including the governor and chief state school officer.

___ 2. An "accountability pressure" exists — such as a state testing program, or state reform legislation that creates a local need to improve.

___ 3. The program provides adequate discretionary resources for implementation.

___ 4. The SEA provides ongoing technical assistance by top-notch trainers skilled in the program and the training process.

___ 5. A positive and collegial working relationship between the state education agency and local educators is developed to support school improvement.

___ 6. Support conferences or other networks are provided where personnel from successful districts can share their experiences with others.

___ 7. The experience of leaders in successful schools is used to help develop the skills of state education agency staff who are responsible for technical assistance.

C. Local Conditions for School Improvement

___ 1. Schools are "ready" for a school improvement program — that is, school leadership is stable and supportive of the new program; there is little turmoil or innovation overload; relationships between the district, principal and teachers are not severely strained.

___ 2. The district leadership supports participation in the program and adds its own incentives, pressure or mandates for school participation.

___ 3. The program has a strong district advocate who encourages participation in the program and is responsible for the coordination of the program.

___ 4. Districts perceive the state school improvement program as appropriate for addressing their local needs, mission and goals.

___ 5. The state or district provides a variety of resources to support program implementation.

___ 6. The district successfully completes the necessary management and administrative tasks to implement the program.

___ 7. The district and school press to implement fully all elements of the program.

___ 8. The principal is a knowledgeable leader.

___ 9. Implementation of the program requires only moderate organizational changes for schools.

Glossary of terms

C

The following are definitions of variables for the instructional and schoolwide improvement program causal networks (Diagrams 1 and 2).

Initiation stage

Accountability pressure — a state or local district action/requirement that creates a school need to improve. Could be a new state testing program in the basic skills, a local district decision to improve student performance or a state education reform to upgrade standards. The pressure is external to the school.

Appropriate application — use of an externally developed program for the purpose for which it was developed, i.e., at the appropriate grade level and for the appropriate subject area (instructional model only).

Awareness training for administrators — a conference or workshop for local district and school administrators on the effective schools research and the state's effective schools program; an opportunity for the state to explain why it has developed the program, the research base on which it is developed and its expected outcomes. (Schoolwide model only.)

Cognitively clear process — a focused and detailed procedure for engaging in the school improvement process, usually including a needs assessment, identification of key areas to improve, selection of programs to implement, implementation of programs and monitoring of implementation, as well as training necessary to engage in these activities effectively. (Schoolwide model only.)

District advocate — a person in the central office who knows of the state program, feels it will help the district address areas of need and develops support within the central office as well as at local schools for joining the state initiative; the district "true believer" in the state program.

District commitment, leadership — support for the state program from the school board and district superintendent. Technical support such as the form of new policy, allocation of funds, creation of new management and administrative positions and activities, and symbolic support such as attending initial training and expressing commitment to the program through various communication opportunities.

District mission, goal — education goals and objectives for the school district. Could cover student behavior and/or teacher/administrator/school behavior.

Effective schools vision — a clearly articulated description of the key elements that constitute an effective school. The elements can be those found in the effective schools research, or can be broader or narrower. The key is that a vision exists, is clearly articulated, is communicated to everyone in the school and drives administrative and management decisions. (Schoolwide model only.)

High-quality program — a program that has "worked" in other settings, usually theory-driven, research-based and proven effective by experimental research. Many programs such as active teaching, Madeline Hunter's clinical teaching and Missouri Mathematics have a national reputation for being effective. (Instructional model only.)

Initiation — central office staff and sometimes principals deciding that the state program is appropriate for local district needs and discussing whether to participate. Initiation here is at the top of the system, and often does not include teacher participation.

Legitimacy — an aura surrounding either the program itself, the program sponsor outside the district, the district program advocate or district trainers. Legitimacy evolves from expertise and association with proven effectiveness.

Local need — an area identified by the school that needs to be improved. Can be created or emphasized by external accountability pressure.

Local perception of fit — the perception by teachers and administrators in schools that the state program will help them improve in an area of identified need. Perception of fit derives from an alignment of state accountability pressures, district goals, local needs and the objectives of the state program.

Philosophy that all can improve — a program assumption that teacher and student behaviors are not "fixed" but can change given good training and support; a belief that change and improvement can happen; a belief in the desire of all — teachers, administrators and students — to do better and the willingness of all to work towards that goal.

Start decision — the decision by the central office, board and/or principal to participate in the state program. Again, the start decision is most often made by those at the top of the system.

Initial implementation stage

Common cognitive frame — an understanding of the various dimensions of the program — substantive and administrative — that is held at least by all members of the cross-role team and that helps develop managerial/technical alignment, i.e., administrator and teacher behaviors that support what needs to be done by those in positions of administrative power and in classrooms to implement the program as designed. A shared perception of the goals and substance of the program, its implementation requirements and the complementary roles of all actors in the district for effective implementation.

Cross-role teams — a group of teachers, school administrators and central office staff usually created immediately after the start decision for the purpose of working on program implementation. Often the cross-role team is involved in initial training and provides subsequent training within the district. While the

start decision often, but not always, is made without teacher involvement, implementation usually starts with the creation of a cross-role team that includes teachers.

District experts, trainers — administrators or teachers in districts expert in the substance of the program as well as expert in how to train people in the skills needed to implement the program. Often used to train school people during initial, front-end training, and to provide ongoing technical assistance as the program is being implemented (instructional model only).

District orchestration — the planning, coordinating and administering of district activities needed to implement and support local school improvement activities. This might include coordinating state program staff activities with district personnel, scheduling initial training especially when local implementation depends on external turnkey training, allocating local **funds to release teachers for training,** coordinating the provision of state or other external technical assistance, developing **peer networking** conferences for school principals or teachers involved in the program, etc. District-level orchestration is the analog at the district level to school-level orchestration.

External turnkey training — a "training-of-trainers" strategy in which the state develops local district and school people to be program trainers. A program-capital multiplying strategy that expands the number of program experts — trainers — in the state, rather than just training people to implement the program locally. (Instructional model only.)

Front-end training — initial training that provides the bulk of the substance for program implementation, often conducted by state program staff or external consultants, though conducted by local trainers (usually members of cross-role teams) if the state program includes a turnkey training strategy. (Schoolwide model only.)

Immediate rewards — a perception, early in the initial implementation stage, that there is something in the program that is useful for program participants. It could be a generated by common language for instruction in the training programs, the process of engaging in a needs-assessment process in the schoolwide planning programs, or whatever. An initial feeling that the program has something "in it" for the participant, who usually is exerting considerable energy toward becoming involved in and implementing the program.

Initial implementation — tangible and visible actions that indicate the program is being implemented in a school such as gathering data on student and school performance, engaging in shared diagnosis and need ranking, identifying programs to implement, conducting initial training for such programs, etc.

Ongoing external technical assistance — implementation assistance provided to the school by people outside the school, either from the central office or the state. The assistance can include ongoing training sessions for additional program elements, coaching of and help for individual teachers or building administrators, etc.

Principal as knowledgeable leader — development of the school principal as an expert in both the substance of the program and school-level managerial and administrative actions needed to implement the program successfully in the school, usually created by the principal's being involved in both cross-role teams and initial training. Many programs depend on principals playing key, substantive roles in school implementation, such as training teachers or clinically supervising teachers.

School-level orchestration — the planning, organizing and managing of the many school activities that are necessary for school-level implementation, such as scheduling activities, hiring substitutes when training starts, involving faculty at appropriate points, communicating and coordinating program activities, gaining support and resources from the central office, etc.

For the schoolwide improvement model, implementation at the school level of all the actions necessary to get the program "in place" in the school are:

- **Staff development** — training school staff in the skills needed to implement the program.
- **Staged staff involvement** — involving teachers in all grades and in all subjects in decisions related to how the program will be implemented in their specific school.
- **Monitor progress** — gathering and disseminating data on how the program is progressing in a particular school. Includes communicating technical information about progress in a specific school.
- **Communication and coordination** — mechanisms to let everyone in a school know how the program is being implemented, and managerial and administrative mechanisms to support program implementation, such as scheduling training, arranging times to air implementation problems and identifying implementation needs, etc.
- **Control discretionary money** — for those state programs that provide schools with discretionary resources, deciding how school funds will be allocated and used.
- **Data collection** — usually of student performance in various content and discipline areas, but also of teacher and school characteristics related to the vision of effective schools being implemented. Almost always includes some student test score information, either criterion- or norm-referenced, and often includes perceptions of teachers and measures of school climate.
- **Shared diagnosis of needs/goals** — discussion of the analysis of the data collected, ranking of areas needing improvement (related to student performance, teacher effectiveness or school characteristics) and selection of priority areas to work on, by school faculty, administrators and often parents and the community. Widespread teacher involvement usually is characteristic of this phase because it identifies all areas needing improvement in the school and those areas targeted for work in the immediate academic year.
- **Search for solutions** — looking for validated, proven, high-quality programs, either in the research and development community or a diffusion network, that address areas identified as needing improvement in the particular school. Important here is the search for externally developed programs appropriate for locally identified needs.
- **Implementation plans** — developing plans for how the school will implement programs addressing locally identified areas to improve.

Shared sense of progress — mainly in the schoolwide programs, a sense that the planning process is producing "something," which might be simply the needs-assessment activity, the process of developing implementation plans for how to use an externally developed program, etc. A feeling that there is some action in the program, in addition to just talk about doing something.

Complete implementation stage

Completeness of implementation — a comprehensive, total implementation of all components of the program on the part of teachers and principals in the school.

Fidelity of implementation — a policy requiring full, faithful, total program implementation rather than modification of the program to "fit local needs." The "stick" aspect of complete implementation.

Monitoring feedback, evaluation — provided information to decision makers that was used to monitor progress and make program improvements (schoolwide model only).

Ongoing technical assistance, internal to the district — provision of assistance over the 6–18 month period of implementation to help principals and teachers get the total program "in place." Includes training sessions, individual coaching sessions, peer networking sessions or whatever local program implementers need. The "carrot" aspect of complete implementation, and the sine qua non of successful implementation.

School impacts — organizational and cultural changes in the school, such as more observation of teachers, a process for developing plans for school improvement, more collegial interactions, etc., i.e., the technical and affective effects of the program on the school as an organization.

Skills mastery — development of individual (teacher and principal) competence in the skills needed to implement the program to the point of ease of use. Individual expertise in the skills included in the program implemented. The "result" of the combination of the "stick" and "carrot" aspect of local implementation (instructional model only).

Student outcomes — improved student behavior, either better performance on achievement tests, better discipline or better attitudes. The technical and affective effects of the program on students (instructional model only).

Teacher, principal commitment — ownership of, buy-in to the program on the part of teachers and principals. Usually emerges after skills mastery in the training program, or school impacts in the schoolwide planning programs.

Teacher, principal outcomes or impacts — development of new skills (better teaching, better clinical supervising, better needs-identification) and attitudes for teachers and principals. The technical and affective effects of the program on school staff.

Institutionalization stage

Continuation decision — a central office/school board decision to continue to be involved in the state program, after the first and/or second year.

District mandate — a district requirement that all schools, teachers or principals become involved in the state school improvement program. Usually occurs after successful involvement of schools initially participating in the program.

Institutionalization — incorporation of the activities, resources and requirements of the program into the standard operating procedures of the district and school such as the budget cycle, district and school goals and objectives, principal

and teacher job descriptions. Having the program cease being a separate entity and start being an ongoing, programmatic entity of the district/school.

Program demands — program requirements for organizational and curricular change, or need for management and fiscal resources. The level of technical and administration needs of the program for effective implementation.

Tie-in to other improvement efforts — the relationship of the specific program to other programs, initiatives or changes involved in a district's approach to education improvement.

Information sources

D

Two excellent reviews of effective schools research are:

National Institute of Education. **Reaching for Excellence: An Effective Schools Sourcebook,** May 1985. (Available from the Government Printing Office, Washington, D.C. 20402, $7.50.) This sourcebook summarizes the effective schools research according to different perspectives — effective classroom practices in secondary schools, effective school practices at each level and district- and state-level practices that support effective schools management and instruction. A final section presents a directory of successful effective schools programs currently implemented across the nation and a complete bibliography.

Northwest Regional Educational Laboratory. **Onward to Excellence: Making Schools More Effective,** April, 1984. (Available from NWREL, 300 S.W. Sixth Ave., Portland, Oregon 97204, $1.50.) **Onward to Excellence** provides a research synthesis of effective schooling practices including school effects research, teacher effects research, research on instructional leadership, curriculum alignment research, programs coupling research and research on educational change. Findings are organized into three sections, each focused on one level of school organization: the classroom, school and district. An effective schooling research bibliography is also included.

Also available from ECS is **State Programs of School Improvement, 1983: A 50-State Survey** by Van Dougherty (working paper no. I-83-1).